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NUMISMATIC NOTES AND MONOGRAPHS

No. 136

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TWO HOARDS OF PERSIAN SIGLOI

By SYDNEY P. NOE



THE AMERICAN NUMISMATIC SOCIETY

BROADWAY AT 156TH STREET, NEW YORK

1956

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Two Hoards of Persian Sigloi

By SYDNEY P. NOE



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HOARD I

The coins of this hoard, 255 in number, appeared on the New York market in the summer of 1950. No information as to where they had been found could be obtained. It was hinted, without any supporting evidence, that they came by way of Smyrna. The presence of a single Croesus half-stater points to a source in Asia Minor. Most of the coins had been cleaned so that it was not observable whether the original surface accretions were uniform. They were offered in two lots. The first consisted of twenty coins, including the half-stater of Croesus; these had been selected for their superior condition. The remainder, 235 in number, and all sigloi, were offered at a price lower than that for the first lot—a price so low that it was apparent that there was slight hope of finding a buyer, and one so low that the original finder must have received very little for them. It was averred that these 255 coins comprised the entire hoard. In my judgment there can be little doubt that both lots came from a single hoard.

The data to be derived from published hoards containing sigloi is disappointing.¹ A large find is known to have been made in Calymna in 1823, but aside from the statement that there were several thousand sigloi along with satrapal issues for Asia Minor, we get very little information.² Of a hoard found near Sardis in 1863 we are told that forty-four staters and eleven half-staters of Croesus were examined along with 145 sigloi,³ an interesting parallel to the present hoard.

¹ Cf. E. S. G. Robinson, "A Silversmith's Hoard from Mesopotamia," in *Iraq*, XII (1950), pp. 49ff. Referred to as Robinson's Mesopotamian Hoard.

² Sydney P. Noe, *A Bibliography of Greek Coin Hoards (Second Edition)* (NNM No. 78), No. 189.

³ *Ibid.*, No. 923.

Dr. Regling noted a hoard from Smyrna in the Constantinople Collection, 149 in number, many countermarked and hammered flat along with four in halves—the condition doesn't promise much should this "bullion" hoard some day become available for study.⁴ Mr. Newell's Cilician Hoard,^{4a} contained 49 sigloi, most which were so hacked and countermarked as to make die-identification difficult. In 1916, a small hoard of 55 pieces which came from Smyrna was described by Dr. J. Grafton Milne⁵ and some important facts for the later groups emerged. A segment of a hoard published by E. S. G. Robinson⁶ contained two sigloi which are described as having the same reverse die as a daric. A recent contribution from the pen of the same writer describes seven sigloi from a Mesopotamian hoard which has long been in the possession of the British Museum.⁷ A discussion of the bearing of these on the dating of our hoard will follow the cataloguing of its contents.

In the brief descriptions which follow, no attempt is made to differentiate the obverse dies because wear or the exigencies of striking make certainty as to any die identity between two specimens difficult. The sequential order is established independently, primarily from the numerical representations of the punch dies. In Group I the pieces from the same punch die are obvious on PLATE I and are further indicated in the catalogue by the numbering.⁸ Among the pieces coming late in the hoard, Nos. 165–184 are from the same pair of dies, but only four of these (and one enlargement) are shown on the plates. Pieces having obverse or reverse enlarged are marked with an asterisk. Many of the coins selected

⁴ Ibid., No. 993.

^{4a} Ibid., No. 252. Referred to as Newell's Cilician Hoard.

⁵ Ibid., No. 493.

⁶ Ibid., No. 84.

⁷ *Iraq*, XII (1950), p. 47.

⁸ Beginning with Group II, there is but a single punch die for each group. These dies are lettered A to F.

for enlargement have been chosen in order to show their countermarks. A few of the countermarks which occur on the edges are enlarged on PLATE XV. For the other countermarks, reference is made, where possible, to identical or similar ones in the table contained in Mr. Newell's "A Cilician Find" (*Numismatic Chronicle*, 1914, p. 5) or to the British Museum Catalogue for Arabia, Mesopotamia and Persia, p. cxxxvii, abbreviated to H. (= Hill No.).

1. Lydia, Croesus. Foreparts of lion and bull, facing.
Rev. Two incuse squares, the one at the left the smaller. 5.31

Persian Sigloi—GROUP I. (2-28)

Bearded figure, running or kneeling to right, crowned with *kidaris* and clad in *kandys*, with quiver at his back, spear in right hand and bow in left. The arrangement is by reverse-punches in lots, indicated by the numbering, of from one to three, with those considered the simplest in form being given precedence.

2. Simplest form of incuse reverse; cf. E. Babelon, *Les Perses Achéménides*, Pl. I, 3-4. 5.56
- 3*-5. Identical reverses; flaw at left edge, two flecks to right of center. Obverses from three dies. 5.47, 5.60, 5.55
6. Reverse less simple. On edge, countermark, PLATE XV, 1; cf. BMC, *Arabia*, cxxxvii, No. 81. 5.43
- * Hereinafter abbreviated to H. 81 (i.e., Hill No. —).
- 7-9.* Identical reverses. Note irregular flan of No. 9. 5.48, 5.52, 5.63
- 10-11.* Punch shows fish-shaped element to left of center. 4.67, 5.58
- 12*-13. Punch shows snake-like element at left edge. 5.55, 5.56
- 14-15. Note relative sizes of flans. 5.45, 5.43
- 16-17. Surface of punch roughened; impress deeper. 5.53, 5.45

- 18-19. Top of punch wider than bottom. On obverse, surface of field shows plowing with tiny chiselmarks made in the die. 5.53, 5.55
- 20*-21. Spear tip outlined (see enlargement). No. 21 has small countermark (repeated) in left field. 5.62, 5.55
- 22*-23.* Note alterations to reverse punch. 5.58, 5.33
24. Punch unusually sharp; may be a recut stage for that of Nos. 12-13. It is identical with Cilician Hoard No. 114 not illustrated by Newell, but in his collection. 5.62
- 25.* Note bevel toward rim in left field of obverse. Countermarks on obverse and reverse. 5.61
- 26.* Quiver and handle of spear well defined; head disproportionately large. 5.45
27. Obverse countermark applied three times (cf. No. 6 and H. 8 and 81). Two additional on edge:
a. PLATE XV, 2 and b. similar to H. 95. 5.53
28. Bevel in left field of obverse. 5.66

GROUP II. Reverse A (29-39)

Eleven coins with same punch die (A) distinguished by a fish-shaped element to left of center. The left edge of the punch breaks down and unites with this element as the die becomes worn.

29. Countermark, PLATE XV, 13, on edge as on Nos. 5 and 206. 5.57
30. 5.47
31. Countermark on obverse. H. 19. PLATE XV, 8. 5.55
- 32-37. 5.58, 5.53, 5.52, 5.45, 5.51, 5.58
38. Two incomplete countermarks on edge. a. PLATE XV, 13?
On reverse, cf. H. 150. On obverse, gouge (not countermark). 5.57
39. Countermark on edge like H. 6, PLATE XV, 3, and Newell No. 36; a second incomplete. 5.43

GROUP III. Reverse B (40-65)

Twenty-six coins with punch-die B, marked by an element resembling a barley-corn to the right and slightly above the center. Above, and near the top, a slightly larger globule.

- | | | |
|--------|---|------------------|
| 40.* | Coin notably thicker at lower left. | 5.57 |
| 41. | Flan unusual in shape. | 5.60 |
| 42. | Imperfectly applied countermark at lower left on obverse, possibly H. 95. | 5.47 |
| 43.* | Eagle's head countermark on obverse, PLATE XV, 4 (like that on No. 62). | 5.58 |
| 44. | Irregular flan with distinctive edge. | 5.45 |
| 45. | Countermark on obverse, triskeles; obverse badly pitted; punch weakly impressed. | 5.46 |
| 46. | Countermark superimposed on royal figure, cf. H. 205. | 5.62 |
| 47. | | 5.45 |
| 48. | Triskeles countermark on obverse as on No. 45. | 5.55 |
| 49. | | 5.55 |
| 50. | Weak edge; countermark resembling H. 6 or H. 7 and No. 39 preceding. | 5.67 |
| 51. | Countermark in right field of obverse; cf. Newell 20 and H. 148. | 5.55 |
| 52-54. | | 5.57, 5.57, 5.55 |
| 55. | Indeterminate countermark(?) in left field of obverse. On reverse, wheel-shaped countermark (cf. H. 38) applied inside punch-impress. | 5.58 |
| 56-57. | | 5.52, 5.51 |
| 58.* | Note that flattened bubble in right field has received impress of obverse die. Further bubbles show on edge. | 5.52 |
| 59. | Flan slightly cupped because of punch impact. Note reverse flattening at extreme right. | 5.52 |
| 60-61. | | 5.57, 5.53 |
| 62. | Eagle's head countermark, PLATE XV, 4, on obverse like that on No. 43. On edge, countermark slightly resembling a <i>fleur-de-lys</i> . | 5.57 |

63. Ram's or calf's head to right, PLATE XV, 7, counter-
marked on obverse. Illustration inverted on plate. 5.43
64. Countermark on obverse remotely like H. 108. 5.53
65. 5.62

GROUP IV, Reverse C (66-83)

Eighteen coins from punch die C. A crescent-shaped element at the lower left has its slightly thickened upper tip joined to the left edge of the punch; an irregularly lentoid shape at the center is in some specimens joined to the upper edge by a thin line. This punch occurs in Cilician Hoard but the coin on which it occurs is marked by Mr. Newell as "Not described."

66. Incomplete countermark superimposed on regal figure
on obverse. On reverse, a second stamp resembles a
crude mask (PLATE XV, 8) and two gouges may have
been countermarks. Cf. Newell 26. 5.57
67. 5.55
68. Obverse field at lower left weak because reverse punch
is off center, as well as because of ↑ ↖ relation of the
dies. 5.58
69. Large flan with both sides nearly complete. 5.58
70. Ring-shaped countermark on obverse at lower right;
on reverse, boar's(?) head (PLATE XV, 9) to left. 5.47
71. Triskeles countermark as on Nos. 45 and 48. 5.46
72. Cross-like countermark in left field below top of spear;
also occurs on No. 405 of Hoard II. 5.56
- 73-74. 5.46, 5.48
75. Left edge shows resemblance to lamination. 5.57
76. Note irregular edge. 5.45
77. Two countermarks on obverse, animal head (PLATE
XV, 10) like that on reverse of No. 70 (boar?) and
quatrefoil. 5.62
78. Punch die off center, and left portion of obverse
thicker. 5.43
79. Reverse shows lamination at left. 5.46
- 80.* Four cavities show on obverse; edge bubbled. 5.55

- 81-82. 5.56, 5.55
 83. Countermark on reverse, interlaced or repeated crescents. The edge is exceptionally rough and thick; the punch is weakly impressed. Edge countermark, PLATE XV, 11. 5.58

GROUP V. Reverse D (84-96)

Thirteen coins from punch D. A short triangle-shaped element is pendant from the top edge. The left edge shows a breakdown at its midpoint. The large element at the extreme right undergoes modifications, a blunting of the original (?) shape shown in No. 86 rather than recutting. Possibly an earlier state of Punch E.

84. Note that line of spear is not straight. 5.60
 85. Bubble shows at top on obverse. 5.58
 86. Note on reverse, excrescence at right. 5.57
 87.* Figure in unusually high relief (recut ?); note curve to spear. Enlargement on PLATE XI. 5.60
 88. Flan unusually small. 5.53
 89.* Thickness of flan is cause of smallness of obverse die-impress. 5.65
 90-92. 5.54, 5.55, 5.55
 93-94. Possibly same obverse die. 5.58, 5.62
 95. 5.60
 96. 5.58

GROUP VI, Reverse E (97-138)

Forty-two coins from punch die E. Long element shaped like an arm, extends from the upper right to the middle of the lower edge. A tiny fissure shows at the lower left corner. Sometimes another fissure shows parallel to the right edge.

97. On obverse, a gouge (not countermark) behind head. 5.57
 98-101. 5.50, 5.51, 5.48, 5.55
 102. Gouge, not countermark, on torso of figure. 5.53
 103.* Note very thick bow-string. 5.57

104.	Countermark like that on No. 21.	5.53
105-108.		5.62, 5.60, 5.60, 5.57
109.*	Note edge and shape of flan.	5.60
110.	On obverse, note bevel in right field.	5.62
111.	Reverse shows rough edge at top and gouge in right field.	5.58

The obverses of Nos. 112-138 are alike and convincingly from the same die. Such differences as are observable could be explained as due to ineffectual striking, re-cutting or circulation wear. Die-flaws which are visible on some coins are off-flan on others. If more than one die is represented, the copying has been very accurate.

112-119.		5.45, 5.52, 5.51, 5.60, 5.60, 5.40, 5.62, 5.60
120-125.	These pieces show a peculiar doubling of the upper part of the bow, best seen in No. 121. There is also visible a roughened surface at the lower left, apparently caused by the course of a tiny chisel in an effort to modify the relief of the figure.	
		5.43, 5.62, 5.57, 5.52, 5.53, 5.67
126-132.		5.58, 5.57, 5.55, 5.53, 5.53, 5.56, 5.40
133-138.		5.57, 5.61, 5.62, 5.58, 5.50, 5.58

GROUP VII. First State of Reverse F (139-164)

This punch has two nearly equivalent fish-shaped elements, the one to the left joined at the top to the left edge; the other, slightly higher on the flan and to the right of its center. Above them, and slightly to the left of the medial line from top to bottom, a small globule in low relief.

139.*	Note irregularity of flan.	5.55
140.	Triskeles countermark; differs from Nos. 45, 48 and 71.	5.59
141-142.		5.55, 5.61

- 143.* Turtle-shaped countermark on obverse (cf. H. 100).
On edge, countermark similar to H. 94. 5.53
- 144-145. Note edges. 5.40, 5.52
- 146.* On obverse, one or more indeterminate countermarks
in right field; on reverse, countermark shaped like
letter *pi*. The crack in the flan extends through to the
obverse. 5.62
147. Note that form of obverse is due to flan not having
been flattened sufficiently. 5.55
- 148-151. 5.34, 5.45, 5.55, 5.51
- 152-153. Note distinctive edges showing on the reverse. 5.54, 5.48
154. Edge shows fold in metal; flan thicker to right of ob-
verse. Crescent countermark on obverse. 5.47
155. Quatrefoil and second countermark like that on
Nos. 70 and 77. Note nearly perfect impress of punch
die made possible by shape of the flan. 5.54
156. Two countermarks on obverse: (1) X (cf. 72 and
B 405); (2) X within square. 5.54
157. Four countermarks: on obverse, (1) X (cf. 156); (2)
indistinguishable (cf. H. 68); on edge, (3) similar to
Nos. 64, 108 and 143; on reverse (4) tetraskeles (cf.
No. 25). 5.51
158. Edge lumpy. 5.62
- 159.* Well centered and well struck. 5.49
160. Die-positions $\uparrow \nearrow$; as a result, bow not struck up. 5.57
161. 5.54
- 162.* Countermark on reverse shaped like a spread *lambda*. 5.53
- 163.* Rough edge shows bubble. 5.62
164. Die-positions $\uparrow \nearrow$; countermark (PLATE XV, 13) as
on Nos. 64, 108, 143 and 157. 5.58

GROUP VIII, Second State of Reverse F (165–255)

This die shows the enlarged elements of the first state (especially the globule and the one to the right) and a tiny letter A added just below the mid-point.

Nos. 165–184 are from the same pair of dies.

- 165.* Note surface in lower left field in enlargement. 5.51
- 166–170. First three pieces illustrated. 5.49, 5.49, 5.58, 5.53
- 171.* Reverse enlarged on PLATE X. Die-positions.
- 172–177. 5.59, 5.51, 5.51, 5.52, 5.53, 5.60
- 178–184. 5.54, 5.54, 5.62, 5.55, 5.54, 5.54, 5.49
- 185–191. 5.53, 5.54, 5.46, 5.52, 5.59, 5.53, 5.51
- 192.* Note stringy bubble at top. 5.52
- 193–194.* Reverse of No. 194 enlarged. 5.59, 5.56
195. Spear-point and bow unusually clear. 5.56
- 196–197.* Reverse of No. 197 enlarged. 5.55, 5.55
- 198–201. 5.52, 5.56, 5.52, 5.52
202. The bow is complete; note curved line of string. 5.55
- 203.* Note doubled line of bow-string in enlargement. 5.53
204. Die-position ↑ ↘. 5.56
205. Gouge in lower left field of obverse. 5.47
206. Countermark (PLATE XV, 13) as on Nos. 5, 29, 164 (on edge). 5.60
- 207–212. Figure slightly reduced in scale. 5.49, 5.60, 5.49, 5.52, 5.49, 5.57
213. Triskeles (cf. 140) countermarked in left field of obverse; on reverse second countermark shaped like an eye (PLATE XV, 14); on edge, indecipherable stamp. 5.53
- 214–217. 5.54, 5.53, 5.60, 5.50
218. Stringy bubble at lower right of obverse. 5.47
219. Countermark like that on No. 51; gouge on exergual line. 5.44
220. 5.64
- 221.* Note discontinuous line of spear. 5.50
222. 5.55

223.*	Obverse countermark like one on No. 143 but smaller in scale; the edge-countermark (PLATE XV, 15).	5.52
224.		5.57
225.	Quatrefoil countermarked in right field of obverse.	5.47
226-229.		5.48, 5.44, 5.56, 5.55
230.	Die-break at top of obverse; bubbles on edge.	5.54
231.*	Well-centered impression.	5.44
232.		5.56
233.*	Reverse enlarged.	5.57
234-237.		5.47, 5.48, 5.65, 5.52
238.	On reverse <i>lambda</i> -shaped countermark in triangular punch.	5.54
239-245.		5.52, 5.49, 5.56, 5.58, 5.55, 5.55, 5.50
246-251.		5.57, 5.50, 5.49, 5.53, 5.53, 5.58
252.	Bow complete; line of spear straight.	5.52
253.		5.49
254.*	Note die-flaws in field and line of spear.	5.53
255.		5.52

Excepting for Group I, in which have been placed those lots of coins from identical punch-dies which number three or less, the coins have been segregated into groups each from a single punch-die. Thus, the coins in Group II were all struck with Punch A, Group III with Punch B, and so on. Primarily, the order of the groups is determined by the number of coins within each. Using the accepted principles of hoard interpretation, the more numerous groups are considered the latest, the progressively less numerous the earlier. In the case of Punch F, there are two states of the die, with 26 specimens from the first state (Group VII) and 91 from the other (Group VIII). Those from the modified die must, of course, be the later, and since Group VIII is the largest section of the hoard, it is in consequence to be considered the latest as well. By the same token, Group V

with thirteen coins from one punch-die has been placed to precede Group VI with forty-two coins from another reverse die.

The arrangement of the groups, however, has not been based solely on the number of pieces from the same reverse punch. An additional criterion, style, had to be called into play. On the confronting PLATES IX and X are the coins of Group VIII with the second state of F as their reverse punch. Twelve obverses (out of 39) on PLATE X have a distinctively "neat" or finished style. Those on PLATE IX (representing 51 pieces) show a style that is far from "neat" and which is not uniform. Because of their greater crudity, the pieces on PLATE IX ordinarily might be considered earlier and even much earlier, were it not for the fact that they bear the impress of the same punch die. The following table shows the proportion between the neat and crude style representations in the earlier groups.

	<i>Rev. Punch</i>	<i>Neat obverse</i>	<i>Crude obverse</i>
GROUP VII	F	14	10
GROUP VI	E	9	15
GROUP V	D	7 ⁹	6
GROUP IV	C	3	15
GROUP III	B	0	20

These proportions and the comparison on the basis of style involves a question of workmanship and provides support for a conclusion that the neat style indicates one (or more) innovators among the die-cutters at the producing mint. The comparison of obverse dies is so unsatisfactory and inconclusive that I have been unable to satisfy myself that the same obverse die occurs in more than one group.

⁹ One omitted.

The enlargements, in addition to offering evidence concerned with technique, support the comparisons of style. Previous efforts at classification have attempted to find portrait characteristics in the royal features which might permit assignment to individual rulers. The enlarged obverses show that this is what one would like to discover rather than what one sees. Throughout the coinage until we reach the latest issues in our hoard (in what we have called the *neat* style), the figure is presented with a head much larger in scale than the body to which it is affixed. In the earlier pieces, the features have a simplified form. The nose is represented by a straight line with a pellet to the left to indicate the nostril. The eye is almond-shaped or globular. Usually, the globular shape has come about as the result of wear. Even in the latest of our groups, the eye has not yet reached the profile form in which it is given on so many Greek coins by 400 B.C. (cf. enlargements of Nos. 221 and 231). The lips in the earliest issues in the hoard are represented by short double lines which give them undue prominence. The voluminous beard is effective in concealing any connection between the head and the torso.

Was the intent the depiction of the royal figure as running rather than kneeling? A kneeling ruler would hardly have needed both bow and spear, but neither is royalty to be thought of as running or even hurrying. But even if running be accepted as the intention, the success of the presentation is scarcely convincing because the exergual line is frequently off-flan, and the absence of any relation to a ground-line provides a touch of caricature owing to the undue length of the trailing right leg.

Between the earliest and latest issues in the hoard there is an intermediate style which can be best observed in the enlargements of Nos. 87, 103 and 109. Here the royal features have fullness of cheek combined with a button nose and a globular eye which bring them into strong contrast with pre-

ceding issues. These pieces must have been contemporaneous, for they share identical punch dies. If they are to be considered as a transition in style rather than the marks of individuality of one of the die-cutters, their number seems to indicate use for more than a brief period.

A glance at PLATE X will show the vast improvement in the style previously referred to as the "neat" style. The features of the figure are now naturalistic, with notable improvement in the treatment of the eye. The head, though still disproportionately large has a better relationship to the rest of the body. There seems to be a slight reduction in the scale of the whole and this occasionally permits the bow to appear on the flan. The disturbing line of the spear seems intentionally minimized. It is in the head, however, that most of the improvement is to be recognized.

The latest issues in the hoard, 91 in number, are from the second state of punch-die F. But although the obverses in what we have termed the neat style preponderate, the proportion of sigloi showing the cruder style, similar to what we find in the earlier groups, is impressive. The dies in the neat style are closely alike, so much so, in fact, as to lead one to think they might have come from the same die and that the slight differences were due to die alterations or repairs combined with defective strikings or wear. Certain coins within this last group are unquestionably from the same pair of dies (Nos. 165-184).

The reverse die F in its two states, is the most remarkable phenomenon of Hoard I. For, after having its details altered by re-cutting, there was added what appears to be the Greek letter A (possibly lambda). This letter, if letter it be, is raised on the coins and consequently must have been engraved on the top-most boss of the deepened die—compare the enlargement on Plate X. No similar occurrence of a Greek letter on the Persian coinage is known to me, and I have no explanation to offer.

Do the die-positions indicate the use of hinged dies? They do show that the same part of the punch is uniformly opposite (i.e., behind) the head of the figure. This might have been accomplished by having a mark or notch on each of the dies, so that these marks could be brought into alignment or near-alignment before striking. Ordinarily, this would result in the die-position $\uparrow\uparrow$. We find, however, an occasional deviation either to right or left for a relatively slight angle, and this is the cause of some of the imperfect or incomplete obverse impressions. In my judgment this deviation is not intentional.

With the favorable conditions found in this hoard, we may seek the reason for the variations in size and the irregularities in shape of flan of the sigloi. There is no indication of the employment of the method of preparing blanks used in Sicily, so convincingly elucidated by Sir George Hill.¹⁰ In proportion to their size, the sigloi are thick, and this affords a considerable edge-surface which is not reached by either of the dies in striking. These edges occasionally show small bubble-like excrescences (Nos. 58, 83, 245), and frequently have folds (Nos. 27, 66, 221), ridges (Nos. 12, 44, 230) or lumpiness (Nos. 59, 76, 139, 146, 153, 158).¹¹ Surface-holes such as may be seen on the enlargement of No. 80 (there are five of them on this piece) are not frequent, but they sometimes occur on the edges. Such conditions must have been the result of the forming process.

¹⁰ The practice there started from the globule which was obtained by casting. "The blank was cast in a spherical mould made of two hemispherical halves. The metal flowed into the joint between the two halves making a sort of equatorial ridge around the blank." The globule was then flattened and afterwards placed between the two dies. Cf *Num Chron.*, 5th ser., II (1922), p. 6.

¹¹ Only rarely is there a splitting of the flan (cf. No. 146) such as is common in larger pieces and which is usually explained as having been caused by striking while the flan was still heated because of annealing. Nos. 58, 139, and 146 show flans with sections which seem almost separated from the body of the coin.

Having the effect before us, can the cause be deduced? What are the observable factors?

1. There is but very slight variation in the weights of the coins. A frequency table shows fifty-three pieces ranging between 5.48 grams and 5.52; 101 ranging between 5.53 and 5.57, and 56 pieces from 5.58 to 5.62. There are only seven pieces weighing more than 5.62; the heaviest piece in the hoard weighs 5.67. There are only 37 coins weighing less than 5.48 and only one below 5.33. This piece (No. 10) weighs 4.68 and may be plated. The punch die, however, is the same as that used for No. 11 which weighs 5.58. There are 157 sigloi weighing between 5.53 and 5.62. The weight of the Croesus half-stater is 5.31. Regling's estimate for the Croeseid norm was 5.60; the average weight given by him is 5.38.¹² The edges do not show marks of filing or other effort to modify the weight of individual pieces. There must have been some way of obtaining a close approximation to uniformity in their weight, and this must have been inherent in the casting of their flans.

2. These flans, in spite of the irregularities in the shapes of some of the coins, show a majority that are oval. The objective seems to have been an oval flan rather than a round one. Only a few are nearly circular. Those which are very irregular form a relatively small proportion, but they are the more revealing.

3. The edges of the oval coins are generally rounded, and this condition would seem to have been present even in the original castings of these flans. To obtain such castings, may we not visualize a bed of clay or some suitable material in which, with a tool whose appropriate size had been determined by trial and error, rows of oval holes or depressions had been sunk. This implement would have produced depressions of the necessary depth and would have permitted edges such as we find on the finished coins that have survived.

¹² *Klio*, XIV (1915), p. 98.

4. We can hardly premise that these holes in the clay could have been so graduated as to secure a proper weight of metal per unit when filled. Nor would this have been necessary if we conceive a tiny container which would have held a quantity of molten silver such as would have given the desired weight—the size, again, having been determined by trial and error. This tiny “ladle” could have been of a material to which molten silver did not adhere or which could be readily cleaned after each use.

5. How did the irregular shaped coins with ridged or bubbled edges come into being? Such bubbles seem to have been formed in the cooling of the molten silver being poured into the depressions in the clay. In the early stages of pouring, the silver would flow freely into each hole and fill it. But as the molten metal began to cool, it would flow less readily; and at a late stage when it would no longer flow, it would have had to be returned to the fire. In the irregularly shaped coins (Nos. 139, 166, 212) and the ones with the ridged or bubbled edges (Nos. 44, 83), may we not see castings which were among the last produced from a particular melting, castings for which the metal flowed partway into the depressions in the clay and solidified before reaching the perimeter? The tetradrachms of Athens for the late fifth and early fourth centuries show conditions which are analogous and which are attributable to a similarity in the casting process.

6. The next step would have been a flattening of the castings. This would have involved no more than placing them on an even surface and giving them a hammer blow of sufficient force. Bubbles other than on the edges would have been eliminated by the blow which flattened the casting to a blank. That such a process was used may be observed from the reverses, in almost all of which a flattened field beyond the depressions made by the punch occupies a considerable portion of the surface. This plain field frequently shows a

bevel toward the center which must have been due to the impact of the punch on the blank after it had been flattened. There are pieces, however, which show a second plane inclined toward the edge, and this could have been produced if the hammer-blow for flattening the castings was not perfectly level, with a thicker edge on one side as the result. This condition explains the imperfect impressions (Nos. 9, 25, 35, 64, 143); the metal was not forced into the obverse die for the portion of the flan affected by the bevel.

7. Almost all of the coins in this hoard show that both obverse or anvil die and the punch-reverse are over-large for the flans upon which they have been recorded. They also show one condition of which but a single exception has been as yet discovered in this hoard, that the dies are uniformly in a fixed relation to one another. On the obverse, we find as a result of the smallness of the flan that the type is almost never complete. Occasionally, the reverse punch will be found as a whole on a flan that is unusually spread. The oblong punches never show a lip or side-projection. There is no indication of such a buttressing projection on any of the 255 sigloi in this hoard. What is even more notable is that there is never an indication of a rim or border to the obverse or anvil die. It seems to have been cut in a flat surface which extends around it on all sides. When the punch was held in a truly perpendicular position, the result should have been a perfectly impressed coin had the flan been of uniform thickness. If, on the other hand, the punch in the striking were occasionally out of the perpendicular, the top of the punch which received the hammer blow might become affected in time and, thenceforth, present for subsequent strikings a hammer-surface which was not truly horizontal. This deviation from the horizontal would, in turn, be communicated to the blanks, with the result that the flan would have received more force on one side than on the other. A metallurgist experienced in the behavior of molten silver would

probably be able to read the evidence presented by these coins, and from it to deduce a convincing explanation of the process employed.

The implications of the countermarks on the sigloi in this hoard are very interesting. In the first place, their paucity is significant. The large numbers of coins from the same die-combinations may be interpreted as indicating that their place of burial cannot have been far from the mint in which they were struck. The absence of these bankers' or money-changers' marks has a double significance: (1) The coins would have been recognized as acceptable without the guarantee of the countermark, that is, what circulation they did see must have been inside an area in which there was little questioning of the purity of the metal of which they were composed or of any other condition that was the cause of having them countermarked. That the coins had seen circulation will be apparent from a glance at the plates, but their weights do not vary widely and the countermarks would therefore not have been applied for certifying that they were of standard weight. (2) Of the 254 sigloi in this hoard, only 40 are countermarked. Some of these forty bear more than one countermark, and occasionally the same countermark occurs on more than one of them. The number of times the countermark is found on the edge, fourteen, is surprising. So, too, is the circumstance that the occurrence on the edge is almost invariably in conjunction with a countermark on either the obverse or reverse. In only two instances (Nos. 46 and 66) is the mark placed on the body of the kneeling figure. Such a placement upon the royal figure was considered sacrilegious.¹³ On the obverse, the mark is most frequently placed in the left field where it will not interfere with the figure. On the reverse it occurs on either side of the punch, and also within the punch itself. (3) If the

¹³ Cf. Edward T. Newell, "A Cilician Find," *Num. Chron.*, 4th ser. XIV (1914), p. 28.

accepted interpretation of the cause for these countermarks as bankers' signets is the correct one, they must have either a local or personal significance. There seems no good reason why they may not also have been a small-scale "international" banker's signets. But even then they would have had a limited recognition and acceptance, and whatever the signet guaranteed would have been given recognition within a well-defined area. In another hoard a siglos has been found which bore not less than seven of these marks.^{13a} The largest number on a single coin in this hoard is four (No. 157). A table of such marks has been published by Mr. Hill in *BMC, Arabia* (p. cxxxvii) but this makes no claim to completeness. Many of the pieces in our hoard bear marks occurring in that table. There are also marks not hitherto recorded, and because photographic enlargements are more accurate than line drawings, they are reproduced in that manner. Among those with animal types, Nos. 43 and 62 represent an eagle's head to left (PLATE XV, 4). No. 63 has the head of a calf or ram to right (inverted on PLATE XV, 7). No. 77 is less clearly impressed. I take it to be a boar's head (PLATE XV, 10); it is not unlike the animal head on the early issues of Phaselis. Some of the signets enlarged on Plate XV are distorted by the shadows (e. g., Nos. 11, 16, 21 and 31), whether due to impressions which are too deep or the opposite.

There are also several countermarks which use some form of the triskeles or tetraskes (Nos. 25, 27, 45, 48, 71, 140, 213). It is natural to associate these with Lycia and to recall the heavy proportions of animate forms among the countermarks which are found on the coins of Selge and Aspendus. Imperfections in the applications of these countermarks make it difficult to establish that two independent occurrences are from the same signet-die. I do find, however, four of those which occur in this hoard among those represented in Mr. Newell's "Cilician Hoard" (N97 with 238; N114 with

^{13a} *Num. Chron.*, 4th ser., XVI (1916), p. 2, no. 5.

156; N100 with 51 and possibly 50; N115 with 66). These are similar in form rather than being identical signets. An edge countermark on No. 223 is unusually distinctive and seems not to have been previously published (PLATE XV, 15).

Believing that a chemical analysis of one of the coins of this hoard would prove significant, we turned to one of our members who had been most generous with his help on earlier occasions, Prof. Earle R. Caley of Ohio State University, whose response is printed in full:

"Dear Mr. Noe:

We have completed our analysis of the specimen of a Persian siglos that you sent in May. The results are as follows:

Silver	96.35%
Copper	2.67%
Lead	0.82%
Gold	0.10%
Iron	0.03%
Total	99.97%

I have been able to locate only four previous analyses of sigloi. Lenormant¹⁴ gives results of determinations of the silver content of two specimens and Bibra¹⁵ gives chemical analyses of two others. The two specimens listed by Lenormant contained 93.0% and 94.0%, and these results were probably obtained by fire assay. The analyses made by Bibra gave the following results:

Silver	88.40%	90.10%
Copper	10.53%	8.44%
Lead	0.68%	1.07%
Gold	0.35%	0.28%
Iron	trace	0.11%
Nickel	0.04%	none

¹⁴ Lenormant, F., *La monnaie dans l'antiquité* (Paris, 1878-1879), Vol. I, p. 190.

¹⁵ E. von Bibra, *Über alte Eisen- und Silber-Funde* (Nürnberg and Leipzig, 1873), p. 41.

“It will be seen that the silver content of the specimen you sent is noticeably higher than that of the four previously examined. Just what this means in terms of chronology or place of mintage I am unable to say, as we lack the necessary data on coins of this type. I believe, however, that it may be significant. A higher degree of fineness is usually associated with an earlier date of issue in a given series, and this may be true here. The presence of lead and the low gold content of this specimen indicates that the silver was obtained from lead-silver ore, probably galena, and not from electrum.

“Thanking you for the opportunity of analyzing this specimen, I am

Sincerely yours,”
(Signed) Earle R. Caley
(July 16, 1951)

HOARD II

Before the previously described hoard was ready for publication, a second much larger find came into my hands in 1952. It was received in several separate parcels, and its finding place was stated to have been Tchal, a small town about forty miles east of Smyrna. The coins were of fairly uniform surface and appearance. A few were partly covered with a hard brown incrustation which refused to yield to ordinary cleaning methods.

The total received comprised 652 coins: 212 half-staters of Croesus, 53 sigloi with the half-figure of the king, 127 with the royal figure carrying bow and spear and 260 drawing the bow alone. The only observable connection with the previously described hoard was in the relatively small proportion of countermarks and in the repetition of some of them. The second largest group of the sigloi, strangely enough, was, with one exception, entirely free from countermarks; the condition of the coins suggests that this group was later than the others. Also notable was the circumstance that the Croeseids were countermarked more often than the sigloi, a few of which latter bore test marks made with a tiny chisel as well. As with the first hoard, it was possible to group the sigloi according to their reverse punches. It was also possible to group the Croeseids in the same manner, and there were some interesting results when this was done. The conclusions regarding the manner of preparing the flans of the sigloi before striking, as deduced from the pieces in the first hoard, were found to hold with this larger number, and it seemed that practically the same conditions also extended to preparation of the blanks for the Croeseids.

The recording of this hoard presented problems. The large number of coins (652) in Hoard II as well as the condition of some of them precluded the possibility of reproducing every piece for publication. However, it was important to make a record of the entire hoard. The coins were arranged carefully in a progressive order determined by the size of lots having the same reverses and then photographed in that order. This permanent record is on file at the American Numismatic Society. Since the time available for studying the coins was definitely limited, this course had to be taken without cleaning the coins first. I am happy to acknowledge the great helpfulness of Mr. Ireton Benson, who volunteered to weigh most of the coins of the hoard. His help to me in checking questions of die-identities makes my obligation to him a very heavy one.

It was possible for the Society to acquire the most significant specimens. These are illustrated on PLATES XII to XIV. Of the Croesus half-staters 18 were selected; of the group with the half-figure, 12; of the group with the royal figure carrying both bow and spear, herein considered the latest of the groups, 12 pieces were chosen (Hoard I, acquired as a whole, contained 254 coins of this type): of the largest group of sigloi, herein considered the earliest, with the royal figure carrying bow alone, 26 out of 260 were selected. Many selections were dictated by the unusual edge countermarks, with the result that some pieces are worn and some encrusted.

In the catalogue which follows, minute variations have not been indicated. Wherever possible, the pieces have been combined into groups with the descriptions preceding. As with Hoard I, countermark identities are numbered according to Hill's table in *BMC, Arabia*, p. cxxxvii, and this reference is abbreviated to H. (Hill). For countermark forms, most of which are new and many of which are edge countermarks, reference is made to PLATE XV.

Croesus Half-Statars

GROUP I.

Pieces of which no other occurrences of either of the reverse punch dies have been identified in this hoard.

Lydia, Croesus. Foreparts of lion and bull, facing.

Rev. Two incuse squares, the one at the left the smaller.

- | | | |
|-------|---|----------------|
| 1-18. | | Wts. 5.24-5.42 |
| 19. | Three edge countermarks: | |
| | a. PLATE XV, 16; b. XV, 17; c. XV, 38? | 5.21 |
| 20. | Edge countermark, Griffon head, PLATE XV, 18 | 5.40 |
| 21. | Countermark on obverse lion, also occurs on reverse of No. 144 (illustrated). | 5.28 |
| 22. | Three countermarks: a. H. 4? on obverse; b. H. 43; c. reversed Z on reverse. | 5.37 |
| 23. | Two countermarks: a. H. 2? on obverse; H. 43 on edge. | 5.30 |
| 24. | Two countermarks: a. H. 53 (twice on reverse), occurs also on 252; b. Crescent on obverse, H. 50? | 5.38 |

GROUP IIa.

Varieties of which there are two specimens from the same pair of punch dies.

- | | | |
|--------|---|-----------|
| 25-26. | | 5.32-5.30 |
| 27-28. | | 5.43-5.47 |
| 29-30. | No. 30 bears countermark H. 156 on obverse | 5.34-5.24 |
| 31-32. | No. 32 bears countermark XV, 31 on edge | 5.31-5.26 |
| 33-34. | | 5.35-5.38 |
| 35-36. | | 5.38-5.29 |
| 37. | | wt. 5.34 |
| 38. | Two edge countermarks: a. Human foot, XV, 19; b. Bull or goat's head r., XV, 20 | 5.46 |
| 39-40. | | 5.32-5.31 |
| 41-42. | | 5.40-5.26 |
| 43-44. | No. 44 with reverse countermark H. 90? | 5.32-5.30 |
| 45-46. | | 5.38-5.31 |
| 47-48. | | 5.35-5.36 |

GROUP IIb.

Varieties which have differing obverses but the same reverse punch dies.

49-50. to 65-66. 5.30-5.38

GROUP III.

Varieties occurring in three specimens of which one or more of the reverse punch dies are identical. (Certainty of identity of obverses often impossible)

- 67-69. Obverses all different; Reverses small punch 2/1
5.35, 5.32, 5.39
- 70-72. Obverses all different; Reverses identical 5.36, 5.41, 5.37
- 73-75. Obverses all different; Reverses identical 5.35, 5.29, 5.36
- 76-78. Obverses all different; Reverses, small punch 2/1
5.39, 5.34, 5.43
- 79-81. Obverses all different; Reverses, large punch 2/1
5.32, 5.36, 5.27
- 82-84. Obverses all different; Reverses identical 5.37, 5.30?, 5.22
No. 84 bears countermark H. 43
- 85-87. Reverses identical; No. 85 bears countermark H. 195?
No. 86, PLATE XV, 33; No. 87, bears three countermarks on edge: a. H. 42; b. Griffon head (twice);
c. PLATE XV, 23. 5.22, 5.18, 5.24

GROUP IV.

Varieties occurring in four specimens on one or more of which one to three of the small punches of the reverse combine with identical large punches.

- 88-91. On No. 90, two countermarks; a. H. 43; b. H. 2? On
No. 91 countermark H. 83? 5.32, 5.37, 5.33, 5.35
- 92-95. 5.29, 5.36, 5.35, 5.32

GROUP V.

Varieties with five specimens having identities in either or both of the punch dies.

- 96-100. Large punch $4/1$; small punch $3/2$ wt. 5.22-5.36
 101-105. Reverse punches the same for all five pieces 5.25-5.39
 106-109. Reverse punches the same for all four pieces 5.32-5.37
 110. Punches as on 106-9; edge countermark as on 157 5.32
 111-115. Both reverse punches the same for all five pieces 5.32-5.37
 116-120. Small punch $3/2$; five obverses the same? 5.25-5.46
 121-125. Both reverse punches the same for all five pieces 5.30-5.38
 126-130. Both reverse punches the same for all five pieces 5.30-5.39

GROUP VI.

Varieties with seven specimens having identities in either or both of the punch dies.

- 131-137. Both punches the same for all seven pieces; No. 136 bears countermark H. 43 plus test chisel cut; No. 137, obverse countermark (see PLATE XII); b. Similar to H. 59. 5.32-5.36
 138-144. Small punch $6/1$; No. 144 has on obverse repeated countermark H. 208 (see PLATE XII), b. reverse mark as on No. 21 and c. indeterminate countermark 5.33-5.41
 145-151. Large punch same for all seven pieces; small punch a. same for 145, 147 and 151; punch b. same for 148, 149, 150; small punch c. 146. No. 151 has an edge countermark a recumbent goat, PLATE XV, 25. 5.27-5.38

GROUP VII.

Varieties with eight specimens having both of the punch dies identical.

- 152-159. No. 157 has edge countermarks a. PLATE XV, 26; b. H. 42 as on Nos. 87 and 573?; c. PLATE XV, 27, also on No. 110; d. cf. H. 54 (repeated); e. H. 43. No. 158 has edge countermark PLATE XV, 31; No. 159 has edge countermark PLATE XV, 31 as on Nos. 158 and 197. 5.26-5.40

GROUP VIII

Varieties with nine specimens having both punches identical.

- 160-168. No. 167 bears countermark H. 90?; No. 168 an indefinite mark, possibly PLATE XV, 28 5.23-5.38
 169-177. No. 176 bears obverse countermark similar to PLATE XV, 33; No. 177 has countermarks a. PLATE XV, 31 on edge; b. PLATE XV, 29 on edge; c. on reverse H. 54? 5.32-5.39

GROUP IX

Varieties with eleven specimens each having both punches identical.

- 178-188. Nos. 183-188 have same obverse die; No. 187 bears countermark PLATE XV, 30. 5.29-5.38
 189-199. No. 197 has edge countermark PLATE XV, 31; No. 198 has obverse mark triskeles; No. 199 has on obverse countermark bull's-head left on lion's snout and b. PLATE XV, 32 (H. 133 reversed) on edge. 5.27-5.40

GROUP X

Variety with thirteen specimens each having both punches identical.

- 200-212. No. 211 bears obverse countermark of two pellets; compare Nos. 144 and 394; No. 212 has edge mark PLATE XV, 31.

SIGLOS, TYPE I (BOWMAN)

Bearded figure kneeling to right, wearing crown and *kandys* (robe), drawing bow and with quiver at his back; an exergual line is frequently off-flan. Reverse: Oblong punch-impress.

213. Singleton with small-scale figure and simplified reverse. 5.32
 214-215. Same obverse and reverse dies 5.34, 5.26
 216-219. Four pieces from same reverse die 5.31-5.40

- 220-225. Six pieces from same reverse die 5.33-5.43
- 226-232. Seven pieces from same reverse die 5.30-5.40
- 233-243. Eleven pieces from same reverse die; No. 242 bears three countermarks, a. PLATE XV, 36; b. PLATE XV, 35; c. PLATE XV, 34. No. 243 has mark as PLATE XV, 35 5.31-5.38
- 244-254. Eleven pieces having same reverse; No. 254 has countermark as on PLATE XV, 37 5.19-5.39
- 255-266. Twelve pieces with same reverse; No. 264 has mark H. 54; No. 265 has crossed chisel marks on edge; No. 266 bears countermark PLATE XV, 39. 5.20-5.37
- 267-285. Nineteen pieces from same reverse die. 5.22-5.40
- 286-306. Twenty-one pieces from same reverse die; No. 306 bears two countermarks, a. H. 42 (also on 393) cf. PLATE XIV, b. cf. H. 100 5.32-5.43
- 307-333. Twenty-seven pieces from same reverse die. 5.30-5.42
- 334-364. Thirty-one pieces from same reverse die. 5.31-5.43
- 365-396. Thirty-two pieces from same obverse die; No. 392 bears indeterminate countermark, possibly H. 104; No. 393 has H. 42 (cf. 306); No. 394 bears on obverse mark having two pellets in diamond—cf. No. 211; No. 395, three countermarks, a. PLATE XV, 39 (repeated), b. on obverse cf. illustr. PLATE XIV (also on No. 511); c. PLATE XV, 38; No. 396, PLATE XV, 31 5.12-5.40
- 397-433. Thirty-seven pieces from same reverse die. 5.29-5.42
- 434-472. Thirty-nine pieces from same reverse die. Nos. 434-438 show top of crown in exergue. No. 438 bears crescent countermark on obverse. No. 439 bears countermark H. 54 on reverse (also on 264). Nos. 440-450 from same obverse and reverse as 434-438. Nos. 451-458 from single obverse and from same reverse as Nos. 434-438. Nos. 459-472 with incrustation or wear which make obverse die comparisons uncertain. 5.26-5.45

SIGLOS, TYPE II (HALF-FIGURE)

Bearded half-figure facing right and wearing crown; in left hand bow with its string parallel to the vertical axis of the die, and in right two arrows with points to right.

- 473-474. Same obverse and reverse; No. 474 countermarked as
 PLATE XV, 31. 5.34-5.35
- 475-476. Same obverse and reverse. 5.35-5.37
- 477-479. Obverses indecipherable; reverses identical. 5.09-5.38
- 480-491. Reverses identical; No. 489 bears square countermark with large pellet at center surrounded by four small pellets, and b. H. 100, cf. No. 306; No. 490, H. 53—also on No. 24; No. 491, a. Similar to PLATE XV, 33 and b. as on Nos. 21 and 144. 5.30-5.40
- 492-503. Same reverses but obverses differ in scale. 5.30-5.40
- 504-525. Reverses identical but obverses with differences in scale. No. 524 has countermark on obverse figure; No. 525 has countermark on obverse figure, a cylix?
 5.31-5.41

SIGLOS, TYPE III (SPEAR AND BOW)

Bearded figure to right, wearing crown and *kandys* (robe) in 'running-kneeling' attitude; in left hand bow—in right, spear (held diagonally across body) with knobbed handle, and with tip (frequently off-flan) in lower right field. Reverse: Oblong punch-impres.

526. Obverse small scale; Reverse punch simple in form. 5.34
527. Obverse small in scale; Reverse simple. 5.29
528. Type slightly larger in scale; Reverse less simple single-tons. 5.31
- 529-536. Broader in scale and style; Reverse developed. 5.28-5.37
 No. 531 bears countermark (the only one for this group)—cf. illus. PLATE XIII and No. 157, also H. 54.
- 537-539. Same obverse and reverse. 5.32-5.38
- 540-575. Thirty-six pieces from same reverse; Obverse die A, five specimens with three possible additions; Obverse die B, three pieces with two possible additions. No. 257, 4.72; No. 549, 5.09; others 5.24-5.41

576–652. Seventy-seven pieces from same reverse	Five singletons
	5.40–5.44
Three lots of three each from same obverse dies re-	spectively
	5.32–5.45
Two lots of seven each from same obverse dies re-	spectively
	5.32–5.40
Forty-eight worn or encrusted coins with identification	of obverse die uncertain
	5.23–5.43

CROESUS HALF-STATERS —212 pieces

One is faced with great difficulty in making comparison of the obverse dies of the Croeseids. In addition to the customary inequality as to condition, whether as a result of wear on the coin or wear on the die, incrustation and discoloration are frequently present. Often with sub-groups from the same reverse punches there will be disturbing variations in the relief on the obverse, which seem to be due to a difference in the force of the hammer-blow received from the respective reverse punches. It is very unusual for both the lion and the bull to be shown on the flan completely. Thus the details upon which one must depend are at the center of the flan and if one of the punches is impressed more deeply in the metal than the other, there will be a resulting weakness of either lion or bull for which it is next to impossible to compensate in making die comparisons. Because of this, and because in addition the obverse design does not lend itself to sharp differentiation, it is frequently impossible to be sure that two of the obverses of these half-staters are unquestionably from the same die, even though their reverses are obviously identical. Of three sub-groups each of which contained five coins there are two which seem to have all five obverses from the same die—the third shows a division which appears to be 2/1/1/1. In consequence, there is little reliance to be placed on the comparison of obverses aside from wear and that criterion,

along with that of the size of the sub-groups having the same reverse punches, has been used to determine the arrangement.

Fortunately for our purposes the variations for the reverses are much less confusing. Alterations or mendings of the punches, if such took place, have not been recognizable as such. There are occasions in which the same large punch is associated with differing small punches and a lesser number in which the smaller punch is connected with two differing large punches, but both conditions are relatively rare.

Of the sub-groups having two specimens from the same pair of punch dies, some have identical obverses and some have obverses which seem to be different. It follows, I believe, that there must have been variations in the lives of the two reverse punches, and that replacement of either could and did take place. The evidence of this hoard, however, seems to indicate that the same pair were used in juxtaposition more often than they were changed. This would imply that, in general, both were discarded at the same time. Notwithstanding these complications, the number of specimens on which the pair of reverse punches is not duplicated in the hoard is surprisingly small, and, to judge from the wear on the obverse, they do not give indication of being the earliest in the hoard.

No attempt to arrange the Croeseids sequentially was made aside from observing evidence of wear and from specimens having identical reverses as outlined previously.

The presence of several sizable lots in which both obverse and reverse were duplicated encouraged an effort to explain the manner in which the two reverse punches of the Croeseids were applied. It has previously been noted that the smaller of the two reverse punches was, without exception, applied to the left on the reverse, which made it come opposite or beneath the obverse bull, while the larger punch was given to the lion (BMC Lydia, p. 5). The only exceptions to this observation are those very rare instances where both of

the square punches are nearly identical in size. The square punches were, without exception, in the same relative position. When the significance of die positions was first explained by Sir George MacDonald in his delightfully clear article in *Corolla Numismatica*, he observed that in his opinion the use of fixed dies originated in south-west Asia Minor. Support for this observation is now abundantly provided.

The next observable condition showed that the two elements of the reverses were separate punches and not a single unit with two parts, for in a small but not negligible number of instances one or the other of the two is found associated with more than one variety of the other punch. Although one punch is smaller than the other, some means of clamping or otherwise keeping them together must have been used, for the coins show a partition whose uniformity of width (or its deformation) recurs, from which it may be deduced that their relationship was constant.

Our knowledge of ancient coining methods is drawn chiefly from dies for coins which date centuries after the ones we are considering. But with fixed dies and punches which may be interchanged, we may conclude that the obverse die was set in a large anvil or cut directly in an anvil which would be large enough and heavy enough to withstand the blows incidental to striking. If the reverse punches were applied separately they may be visualised as having been inserted in arms which would have a definite and a fixed relation to the anvil die. Each would further have to maintain the same position with respect to the other punch, else we should have variations rather than repeated recurrences of identical relationships on the coins.

The alternative involves the conception that instead of a separate arm for each punch there was a single arm into which both punches were fitted or slotted. In support of this latter view, some reverses show the punches so grown to-

gether that they seem to have been fused (Nos. 199, 211). Whatever methods may have been used, one is forced to the conviction that a single hammer blow was used on the coins.

SIGLOS TYPE I (BOWMAN) —260 pieces

This, the largest numerical group of Hoard II consisted of 260 sigloi with the royal figure holding a bow. Of the fifteen punch-dies represented in this group, one is represented by thirty-nine specimens, while others show thirty-seven, thirty-two, thirty-one, twenty-seven, twenty-one and nineteen with the same reverse. This suggests a minting method differing from that normally ascribed to the Greek centers. There are five pieces of this type which suggest what this method may have been. These five pieces are struck high on the flan leaving an exergual space that is unusually extensive,



ENLARGEMENT OF NO 434.

and in this exergual reserve we are able to see the top of a crown such as the royal figure wears in all of the sigloi.

A similar phenomenon is known in other mints which Sir George F. Hill touched upon in his excellent discussion of ancient methods of coinage, where its occurrence is illustrated in several examples, all, however, drawn from coins of a later period. Quoting Hill: "One can only conclude that in each of these cases one die was carelessly hubbed into the

anvil, so close to the other that it was impossible to strike a coin on the latter without getting an impression of part of the former. This is an additional proof that hubbing was practiced, since we can hardly suppose that such a mistake would have been made in the course of the much slower operation of direct cutting."^{15a} Without giving consideration to the conclusion thus expressed regarding hubbing on later coins, I believe that the rejected explanation is the one that applies here. Although the repeated portion of the design is limited to the crown, the form of this crown differs from that worn by the royal figure on this same die where there are four points, whereas the exergual one has five. It seems more probable that the anvil die was large enough to permit the cutting of at least two obverse-type dies, and there may even have been occasions on which more than two were cut. Such multiple cuttings would partly explain the large numbers from the same pair of dies found in these two hoards.

In Nos. 434-472, where these five pieces under discussion occur, there are no less than eleven pieces from this same pair of dies, while a second group contains eight specimens from another obverse, both lots sharing the same punch die. These numbers may be even greater, for among the thirty-nine pieces with this same punch die some were encrusted or so worn that it was impossible to be sure that they did not belong to either of these two obverse dies. Unfortunately, I have not been able to discover a die which embodies the form of the crown seen in the exergue of the five coins.

There is a decided contrast in the scale of the royal figure in coins in this group, which is much greater than for Type III. Compare the illustration of Nos. 242 and 308 with those of Nos. 350 and 402. Nor is this true of the figure alone, it is even more conspicuous when the heads are compared. In No. 242 the head is perhaps slightly too large for the body, but on No. 350, it is grossly disproportionate, nearly, or

^{15a} *Num. Chron.*, 6th ser., VII (1947), pp. 173-174.

quite equalling, the length of the forearm. In No. 319, the arrow is plainly visible above the royal arm, and the lower half of the bow-string shows beautifully, a condition observable in other specimens. The upper half of the bow-string is, however, wisely left to the imagination. Avoiding this dilemma is, perhaps, the reason why the upper tip of the bow is unusually placed so close to the crown. The figure seems intentionally static rather than moving, which is as it should be for an archer.

SIGLOS TYPE II —53 pieces

There are three criteria which may be applied in trying to determine an order or sequence within this group: (a) wear on the obverse; (b) changes or differences in the type; (c) the size of the sub-groups having the same punches. None of these is satisfactorily determinative.

Taking (c) first, we must place Nos. 504–525 as the latest pieces. These coins must certainly be contemporaneous, that is, they must have been struck within the life of the reverse punch. Let us next consider (b). Within this sub-group (504–525) we observe that No. 524 bears a type which is slender and appreciably smaller in scale than the others. This small-scale figure is also to be found in the two sub-groups which are next in size to this one (cf. No. 493), each of which sub-groups contains twelve examples as compared with twenty-two here, a clear indication that the small-scale figure had been favored for an interval which was covered (or partly covered) by the life of three reverse punches. The incidence of the small-scale figure in what we consider the latest sub-group (Nos. 504–525) is only once among its twenty-two specimens. Hence the constriction in scale may have stopped shortly after the use of this, the latest, punch began. Since there is no similar small-scale figure in the smaller sub-groups, here considered the earliest, we cannot

deduce a progression from small to broad type of figure. With there being but six punch-dies in the half-figure type (II), it would seem that use of the small-scale figure was brief and transitional.

TYPE D (Figure with bow and spear), 127 pieces

The seventy-seven coins (Nos. 572–652) from the same reverse punch in this group have strong claim to being considered the latest issues in the hoard. They are the freshest in the find and the absence of money-changers' countermarks, with but a single exception, may imply less circulation as well as great confidence in their genuineness. Dr. Milne's hoard^{15b} contains issues with types later than Type III, but none of Types II and III. Robinson's Mesopotamian Hoard likewise included Type III pieces, but none of Types I and II, and that hoard is dated by him from other coins it contained "about the middle of the first quarter of the fourth century"^{15c}, i.e., 390–385. Hoard No. I, aside from the single Croeseid which M. Seyrig considers to be an intrusion,^{15d} supports the implications of the two other hoards.

COUNTERMARKS OF THE MONEY CHANGERS— HOARD II

There is great variety among the countermarks which occur in this hoard. They are most numerous on the Croesus half-staters of PLATE XII, with thirty-five (out of 212) bearing these tiny signets, in contrast to the six out of a total of 53 pieces in the sigloi group with the half-figures and the

^{15b} *Num. Chron.*, 5th ser., XVI (1916), pp. 1–12.

^{15c} *Iraq*, VII (1950), p. 47.

^{15d} R. Curiel and D. Schlumberger, *Tresors monétaires d'Afghanistan* (Paris, 1953), p. 57.

eighteen out of 260 coins in the sigloi with bow. In Type III a single countermark (out of 127 specimens) is found on the obverse of No. 531, where it is very inconspicuously superimposed on the handle of the spear. Of the sixty countermarked pieces in this hoard (two are questionable) forty-one bear a single countermark, eleven have two (on two coins, one of their respective countermarks is impressed twice), seven have three impressions (again, one is repeated) and a single piece (No. 157) has five differing signets, one of which is repeated. There are ten or more signets which occur on two specimens, and three which are found on three. One mark, the bull's head with the foot showing beneath, although sometimes recognizable only with difficulty because of wear, appears on six coins.

Comparing the signets with those found in other hoards, we find that those in our second hoard are notably smaller in scale than the signets on the sigloi of either Robinson's "Mesopotamian Hoard" or Newell's "Cilician Find." Likewise, there is a difference in the position of their impress on the coin. In our hoard, a greater proportion has been applied to the edges, rather than to the obverse or reverse. It seems to me that these combined conditions, point to a considerable interval between the burial of our Hoard II and these other two.

Among the types outstanding among the countermarks, attention may be called to the human foot on No. 38 (PLATE XV, 19) and the crowned facing head on No. 157 (PLATE XV, 26).

Sometimes countermarks were applied to coins which gave cause for suspicion of their genuineness. No. 38 of Hoard II shows a hole on the obverse. Some of the others have edges with cracks or pittings which suggest plating, but no plated coins have been detected. It is customarily accepted when more than a single signet is present that each guarantees the acceptance of the piece at the shop of the

signet's owner. Under such an interpretation, the coin with five countermarks (No. 157 of Hoard II) would have seen circulation in a number of cities, or, to use the extreme alternative, in a single large city.

In Hoard I, which I believe to be later than Hoard II, the signets are larger in scale. The animal types of Hoard I (PLATE XV, 4, 7 and 9) show more development than those in Hoard II (PLATE XV, 20, 24, 25 and 31), and this is true of the other forms. The countermarks are applied to either obverse or reverse more frequently than to the edges on the later lot (i.e., Hoard I). This tendency is confirmed by pieces in Mr. Newell's "Cilician Find." I believe it is safe to conclude that application to the edge is to be interpreted as the earlier practice. The edge signets are consistently small and simple and few of them are to be found occurring on either the obverse or reverse as well as on the edge.

It is noteworthy that in the earlier Hoard II, the group showing the royal figure holding both spear and bow bears but a single countermark, whereas in the other hoard, which consists of this type unmixed with any other, there are numerous signets.

The scanty occurrence of similar signets in both hoards seems a probable indication that they do not overlap either in point of time or geographically: I note a small triskeles, a doubled crescent (PLATE XV, 12)—the forms are similar but the scale differs: and possibly H 100.

WEIGHTS AND DATING

As has been noted, the first hoard described in this monograph, 256 coins, was received in New York during the summer of 1950 with the usual statement that it comprised the entire hoard. The second lot, 652 pieces, was examined later as a representative part rather than the entire hoard, and was said to have been found in 1945.

The lot examined by Prof. Seyrig (490 pieces)¹⁶ was said to have been found in the region of Smyrna "before January 1946"—how long before being uncertain. The lot examined by Mr. Robinson (1946?) consisted of 228 sigloi and more than 7 Croeseids. There is the information that the 228 coins formed about three-quarters of the total, which would therefore be 304 sigloi—the number of Croeseids is undetermined.¹⁷ The tabulation which follows shows the make-up of these respective segments, and to this should be added the data from a small hoard found in the excavations of Old Smyrna in 1951, and not yet published.

The hoard published by Dr. Milne in the *Numismatic Chronicle* for 1916 contained but two of the sigloi types, the one with the bow and spear and that with the dagger. This dictates a conclusion that the dagger type is the latest of the four. The table shows that the proportionate representation of each of these three sigloi types is about the same for each

¹⁶ R. Curiel and D. Schlumberger, *Trésors monétaires d'Afghanistan* (Paris, 1953), pp. 55–57. This note by Prof. Seyrig supplies the information that the single Croeseid in our Hoard No. I was an interpolation. There is the additional conclusion that Hoard No. I is not part of the lot examined by him (490 pieces).

¹⁷ *Num. Chron.*, 6th ser., VII (1947), pp. 173–174.

TABULATION

Type of Sigloi	ANS H'd I	ANS H'd II	R.'s lot NC 1947	Seyrig's O.Smyrna Lot
Bowman		260	112	165
Half figure		53	16	29
Spear & Bow	<u>255</u>	<u>127</u>	<u>100</u>	<u>83</u>
	255	440	228	277
Croeseids	<u>1 ?</u>	<u>212</u>	<u>7 plus</u>	<u>213</u>
	256	652	235 plus ¹⁷	490

of the three lots listed, and Prof. Seyrig's conclusions that his lot and that seen by Mr. Robinson formed part of a single hoard must now be amplified by the third lot (our Hoard No. II), which on the basis of composition, and countermarks, belongs with the other two. Casts of a small number of sigloi sent to me by Prof. Seyrig bear reverse punches which are represented in our Hoard II. Further, photographs of seven of the Croeseids acquired by the British Museum also bear reverse punches found in our Hoard II, and I have no doubt that bankers' countermarks which were common to all three lots would have been found had either of the other two lots been recorded in detail.

Mr. Robinson's dating is formed with the benefit of the knowledge of the Old Smyrna Hoard which has not yet been published. This hoard contained contemporary silver of Phocaea.¹⁸

A frequency table for the pieces which passed through my hands is appended. My lack of competence as a metrologist is such that I hesitate to offer more than brief observations.

¹⁸ *JHS*, LXXII (1952), p. 106.

WEIGHTS OF CROESEIDS AND SIGLOI FROM TWO HOARDS

	HOARD II			HOARD I
	Croeseid	Bowman	Half fig. Bow & Spear	Bowman & Sp.
5.65-5.67				5
5.60-5.64				34
5.55-5.59				85
5.50-5.54				76
5.45-5.49	4	I		39
5.40-5.44	10	24	4	18
5.35-5.39	84	132	25	60
5.30-5.34	80	89	23	37
5.25-5.29	25	9		8
5.20-5.24	8	3		2
5.15-5.19	I	I		
5.10-5.14		I		
5.09			I	I
4.68				I

Hoard I (255 pieces) contained a single Croeseid, which Prof. Seyrig writes was an intrusion. It came to us in 1950,

Hoard II (652 pieces) contained 212 half-staters of Croesus.
and sigloi: Royal figure with bow alone 260
with half-figure 53
with bow and spear 127

In accepting the conclusion that Hoard II is the earlier, there is the possibility of an overlapping for the issues of the type with both bow and spear. I have been unable to find any evidence of such an overlapping. I believe that there is stronger probability of a gap between the two hoards, basing this opinion on the nature of the reverse punches which are in contrast to the earlier and simpler reverses although the progression from a simple to a less simple form for this coinage is assumed rather than proven. With our present

information, I see no way of gauging the extent of this suggested interval.

The frequency table does show, however, an increase in the weights for the later hoard (I) and implies a raised or changed standard. A norm close to 5.35 grams for the earlier hoard contrasts with that for the later one (I) of approximately 5.55. Regling's average weight was 5.38 and his estimate of the norm 5.60 grams.¹⁹ This change took place during the suggested interval. No effort to parallel the silver with the gold has been made. Neither Hill²⁰ nor Babelon²¹ list any darics with the bowman or with the half-figure. Can it be that no gold with these types was struck, or are we forced to a highly improbable deduction that all such were melted after the introduction of the type with bow and spear? Recoinage seems the less likely of the two alternatives in the light of the evidence at present available.

If there is an interval between the two hoards, as I believe, the second and larger hoard must precede the first by the extent of that interval—an extent which we at present have no means of determining. The larger hoard contains issues of Croesus, whose coinage must have stopped with his downfall in 546. This hoard contains pieces in circulation in Asia Minor down to the date of the burial of the hoard. If we may reason from the relatively equal wear on the Croeseids and the earliest sigloi (Group B) there would seem to have been little or no considerable break after the death of Croesus before coining the sigloi was started. They might even have begun before 546. Such a conclusion would increase the number of years during which the hoard was being formed.

The smaller and later hoard (I) would seem to have been formed over a much shorter period of saving. The same punch-die which is represented by ninety-one specimens is

¹⁹ *Klio*, XIV (1915), p. 98.

²⁰ *BMC Arabia*, etc.

²¹ *Traité des monnaies grecques et romaines*.

also found in Mr. Newell's "Cilician Hoard" and in Robinson's "Mesopotamian Hoard." It is also to be found in Babelon's *Traité*, Pl. LXXXVII, 7, and in BMC *Arabia*, 198, Pl. XXVII, 26.

The low regard in which sigloi have been held by collectors, with their resulting slight commercial value, is doubtless the reason for their having been given little attention when they have occurred in hoards. Not until we have the record of a hoard containing sigloi along with issues of other mints which may be definitively dated can we determine when such a change took place.

The two hoards here recorded presented a unique opportunity. Previous attempts to classify Persian sigloi had not taken into account the reverse punches and their use for this purpose in this monograph is an innovation. Hill and Babelon considered the order of the types quite the reverse of what Hoard II shows. Robinson in discussing the lot described by him in 1947 (cf. p. 41) believed the order to be: II (Half-figure), I (Archer), III (With spear and Bow), although he conceded that the half-figure group (II) might come after the archer group (I). In a letter he accepts the order assigned herein. It is hoped that the data regarding countermarks will awaken fruitful interest and that the evidence of a raised weight-standard will prove significant for metrologists. Finally, we have another demonstration that coins are their own best witnesses.

KEY TO PLATE OF ENLARGEMENTS OF COUNTERMARKS

HOARD I

1. 6
2. 27
3. 39
4. 43, 62
5. 45
6. 62
7. 63
8. 31, 66
9. 70
10. 77
11. 83
13. 5, 29, 38, 164, 206
14. 213
15. 223

HOARD II

12. 87
16. 19
17. 19
18. 20
19. 38
20. 38
21. 137
22. 87?
23. 87
24. ..
25. 151
26. 157
27. 157

HOARD II

28. 168?
29. 177
30. 187
31. 32, 158, 159, 177,
197, 212, 396.
32. 199
33. 86, 176, 491
34. 242
35. 242, 243
36. 242
37. 254
38. 395
39. 157, 266.

PLATES

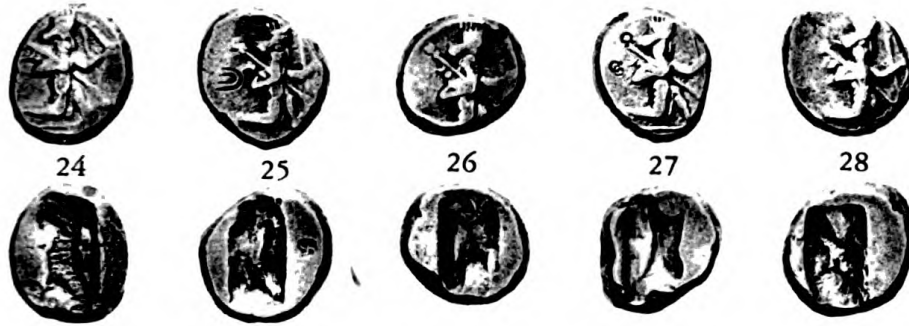
PLATES

I



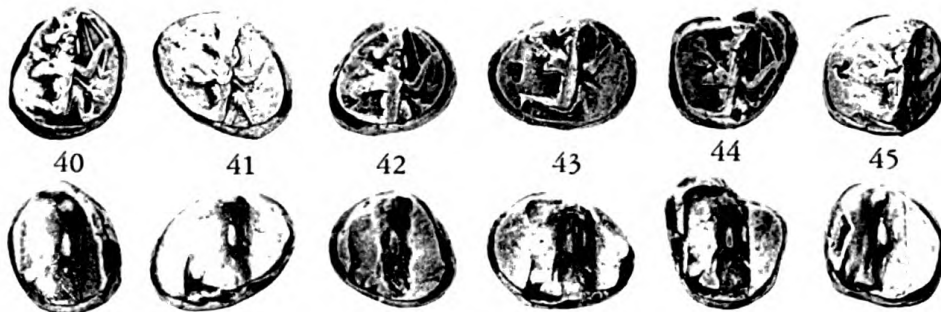
GROUP I

II

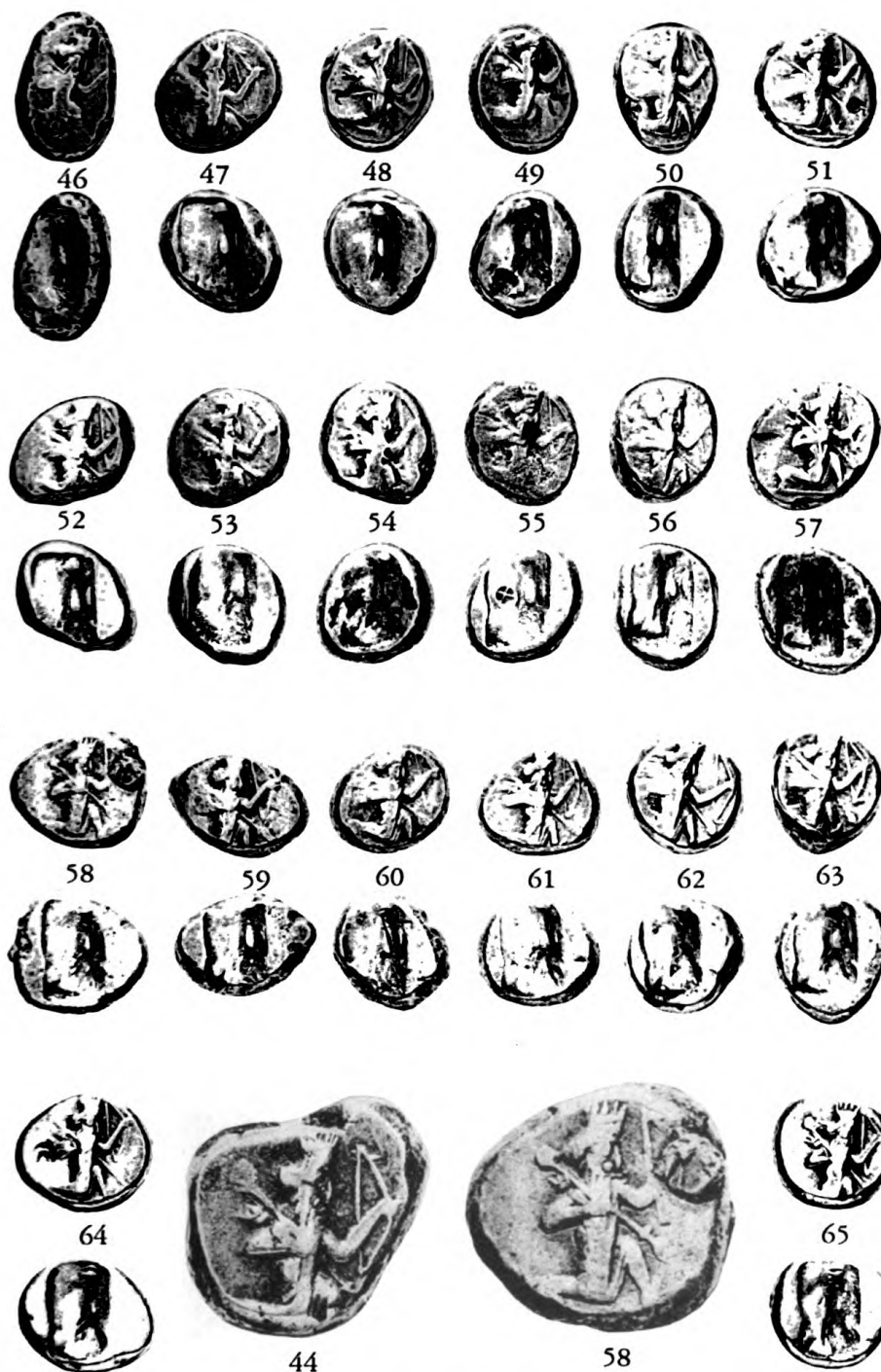


GROUP I

III



GROUP II, REV. A

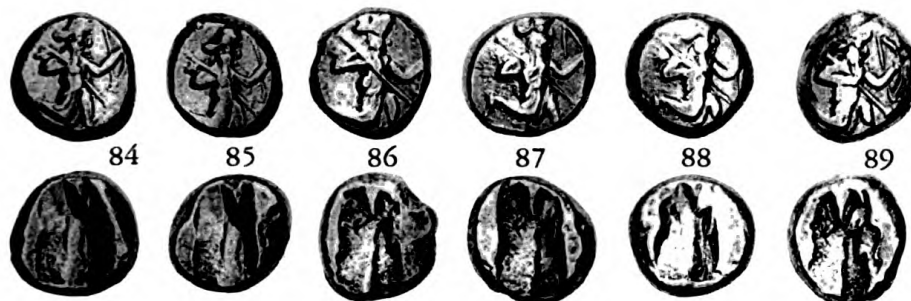


GROUP III, REV. B

V.

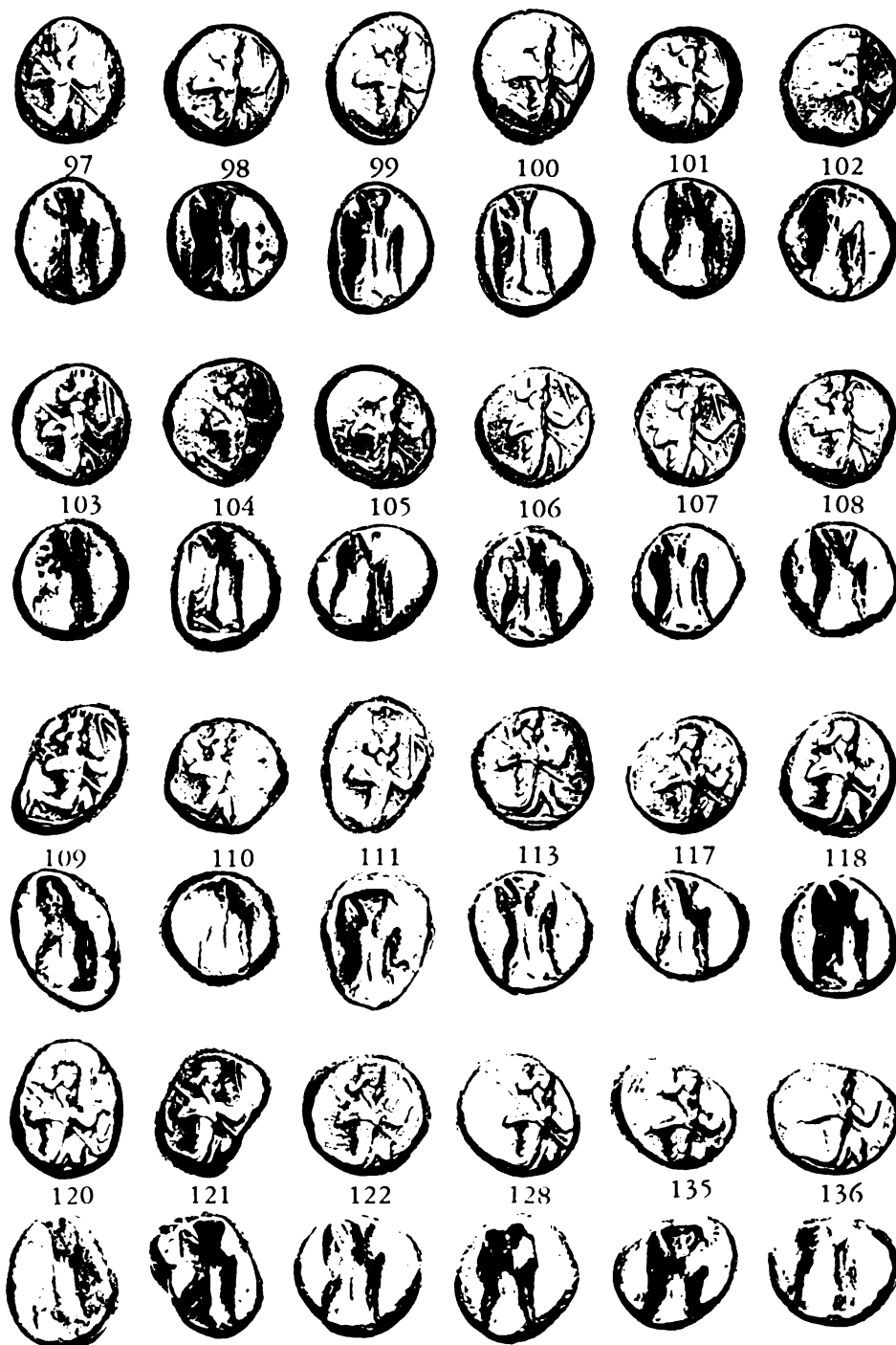


GROUP IV, REV. C



GROUP V, REV. D

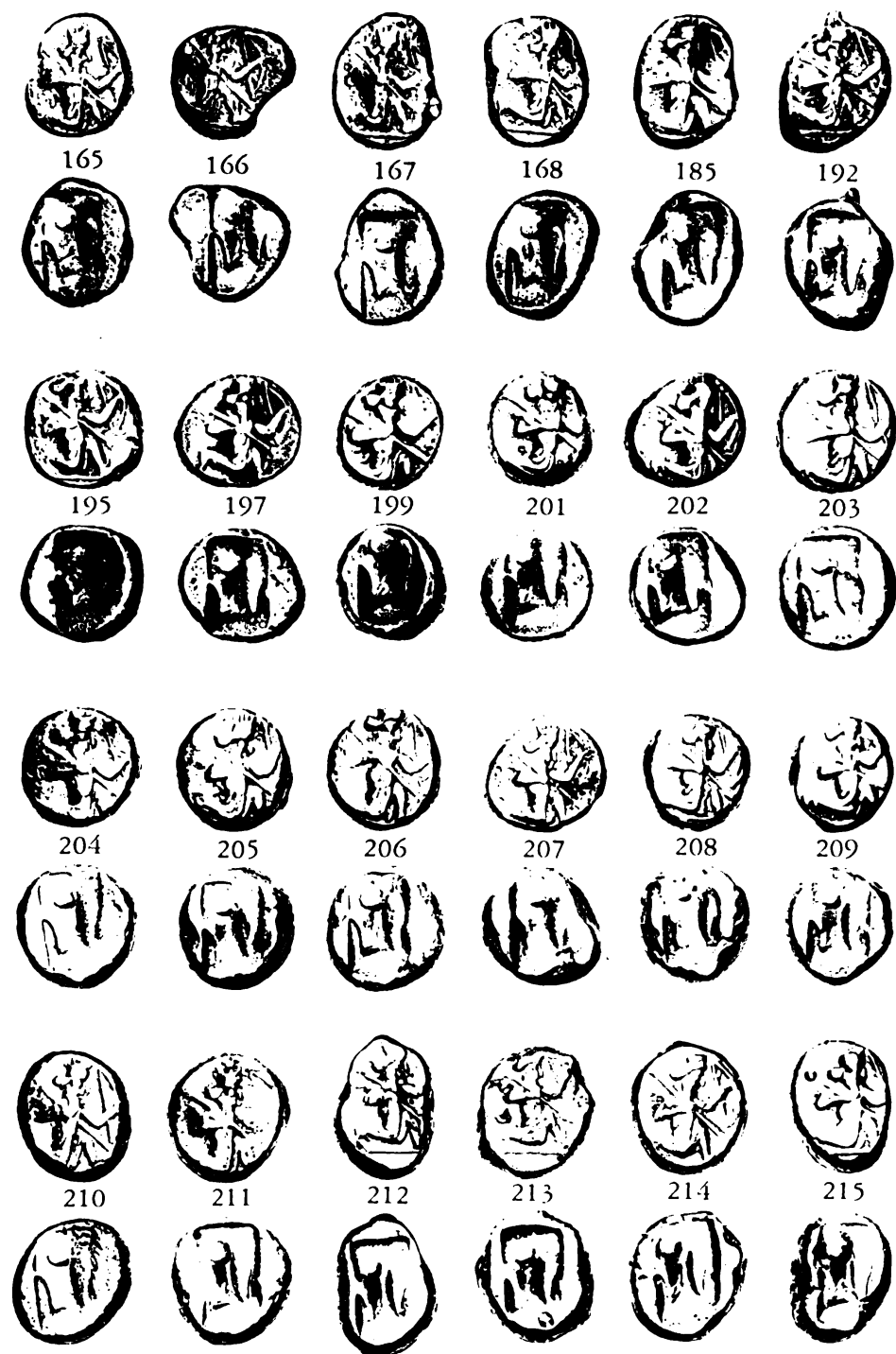
VII



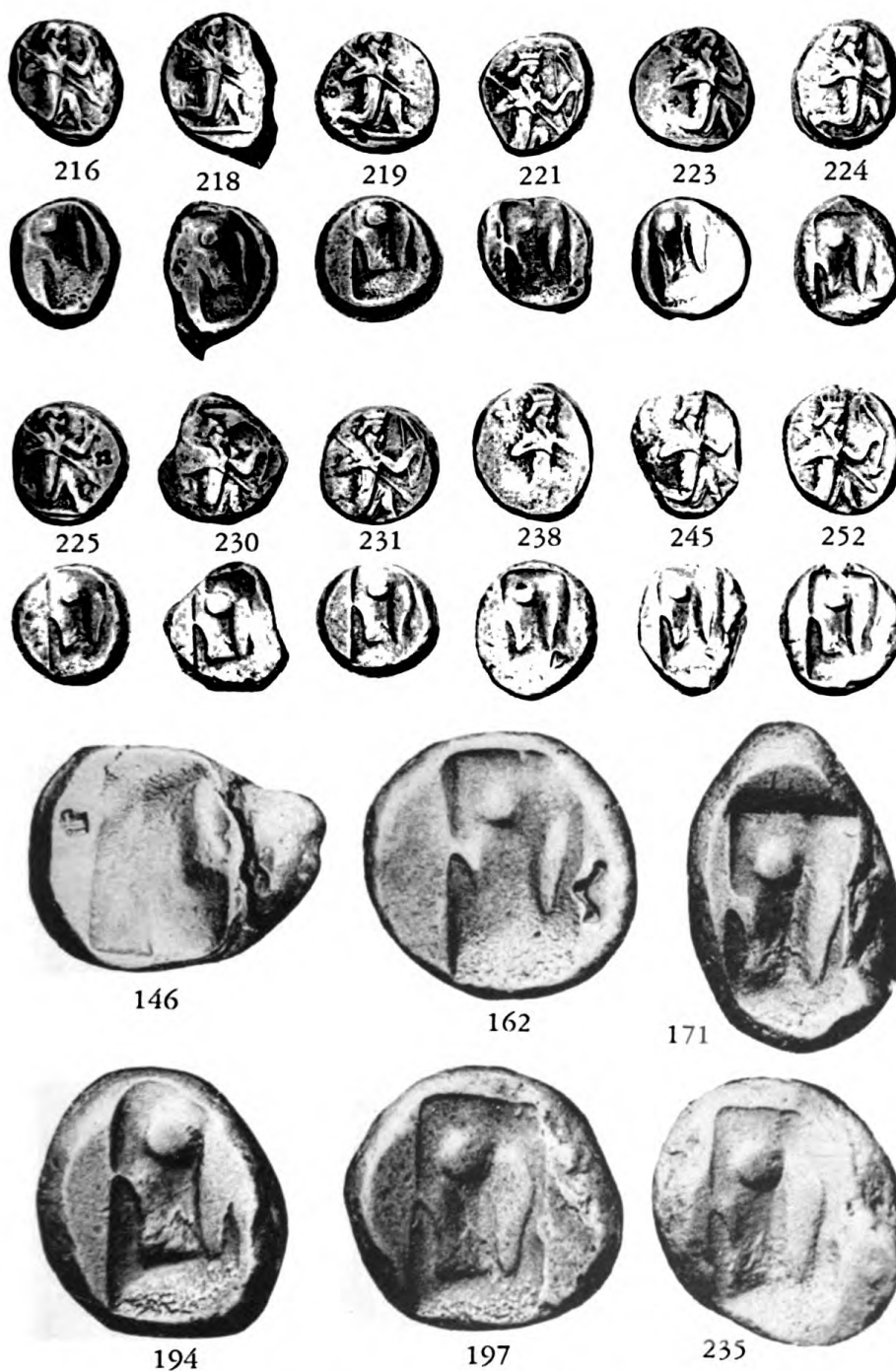
GROUP VI, REV. E



GROUP VII, REV. F (1ST STATE)



GROUP VIII, REV. F (2ND STATE)



GROUP VIII, REV. F

XI



87



159



163



165



192



203



221



223



231



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ENLARGEMENTS



17

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38

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137



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160



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199

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CROESEIDS OF HOARD II

XIII



SIGLOI, TYPE I, HOARD II



SIGLOI, TYPES II AND III



ENLARGEMENTS OF COUNTERMARKS

NUMISMATIC NOTES AND MONOGRAPHS

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THE
TRIUMVIRAL PORTRAIT GOLD
OF THE
QUATTUORVIRI MONETALES
OF 42 B.C.

By THEODORE V. BUTTREY, JR.



THE AMERICAN NUMISMATIC SOCIETY

BROADWAY AT 156TH STREET, NEW YORK

1956

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The Triumviral Portrait Gold
of the *Quattuorviri Monetales*
of 42 B. C.

BY

THEODORE V. BUTTREY, JR.



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PREFACE

The difficulties inherent in establishing the chronology of the moneyers of the Roman Republic are only too well known. It is hardly necessary to present an account of the work done over the last century, or to remark that at many points certainty seems as far removed as ever. Only three years ago we saw that Broughton at any rate felt that whatever work had been done on the problem had achieved results only conjectural at best. For he excluded the moneyers from his annual arrangement of magistrates and relegated the lot to an appendix in the second volume, listing them alphabetically.¹ Pink has constructed a scheme covering the entire period, but his publication wants the essential argumentation which could establish his results as permanent.² In fact, they are already being challenged.³ Any work, then, which can cast the smallest light on the problem—granted that there be light rather than the generation of more heat—ought to be of some value.

Yet, although the problem be justly attacked, one may question whether the fine detail given below is really necessary to the presentation of the solution. The answer is two-fold. First, obviously the problem could be stated, the method briefly described, and the solution revealed. But in no way would the final position be any stronger than the author's word. Without the solid foundation of proof pre-

¹ T. R. S. Broughton, *The Magistrates of the Roman Republic*, New York, 1951-2.

² Karl Pink, *The TRIUMVIRI MONETALES and the Structure of the Coinage of the Roman Republic* (Numismatic Studies no. 7), New York, 1952.

³ Cf., e.g., the reviews by Alföldi (*Gnomon* XXVI [1954] 381-91) and Hersh (*Numismatic Chronicle* series 6 XII [1952] 145-51).

sented, the solution would become, for the reader, simply one more amid the dozens of conjectures. One may witness the attacks—justifiable attacks—on both Pink and Sydenham,⁴ both of whom might have been able to make a stronger case for a given attribution if space had been available for the publication of their reasoning. The method of this monograph will be to arrive at a solution scientifically, insofar as that is possible; thus the facts determined by the method and leading to the solution should be presented fully.

Second, regardless of the problem at hand, the method itself, may it be suggested, is worthy of consideration. The description of die links as a guide to chronology is well known. Many authors have arranged a given mass of coin in sequence by means of the study of the dies used in common by two or more pieces.⁵ Generally, the number of coins is so great that the individual piece is granted no especial study. Nor need it be. If one proves that, say, obverse X is struck only to reverses 4 and 5, it will matter little, in establishing the chronology, if we have a hundred examples of X/4 and only three of X/5. Similarly, it matters little to prove that the sequence can be X/4, X/5, X/4 *bis*, X/5 *bis*. For while some importance may reside herein, the one necessary fact is established: that obverse X was used after reverses 1, 2, and 3 were consumed, and before 6, 7, or 8 were conceived.

⁴ E. A. Sydenham, *The Coinage of the Roman Republic*, London, 1952 (hereafter "Sydenham").

⁵ E.g., E. T. Newell, *Reattribution of certain Tetradrachms of Alexander the Great*, New York, 1912. Most recently, Lucien Naville, *Les Monnaies d'Or de la Cyrénaïque*, Geneva, 1951; D. M. Robinson, *A Hoard of Silver Coins from Carytus* (Numismatic Notes and Monographs no. 124), New York, 1952; Doris Raymond, *Macedonian Regal Coinage to 413 B.C.* (NNM no. 126), New York, 1953. R. I. Nesmith, in *The Coinage of the First Mint of the Americas at Mexico City* (NNM no. 131), New York, 1955, established a chronology in his material not through the dies directly, but by a minute study of the punches used to manufacture the dies. I owe a great deal to the method which he conceived.

Whatever the significance of the hundred examples of X/4 *versus* the three of X/5, the chronological sequence remains the same.

For this reason very little work has been done with the individual piece, with the arrangement *inter se* of the hundred pieces struck from the dies X/4. In that context the results would be almost without value. And the examples of this approach which spring to mind are to be found not in the study of ancient coins, but in that of early American.⁶ Such fineness in detail may be considered unnecessary; in the problem to be discussed in this paper it is essential. For if it can be shown that the sequence X/4, X/5, X/6 is valid, while X/4, X/5, X/4, X/6 is not, the entire result of the paper is altered. For the number 4 or 5 or 6 will represent here not simply another reverse die, but the reverse die of another moneyer.

It is essential then that each coin to be considered below be minutely examined. And if the method be seen to have any usefulness, it must then be applied more widely to the problem of the arrangement of the Roman moneyers. To be sure, in the latest series the moneyers rarely share a die; but the earliest silver—anonymous, or bearing a monogram or symbol,—can ultimately be conquered only thus. If the dies of the period can be collected and examined, eventually they must yield the solution for which we have been searching so long. Alföldi, preferring an examination of style rather than of die links, has already suggested the same approach.⁷ One can hardly conceive how many thousands of coins would have to be examined. Yet if anything is accomplished in this manner, the results will stand, permanently, against theory and conjecture. Similarly, the results of this paper are, at

⁶ E.g., S. S. Crosby, *The Early Coins of America*, Boston, 1875; W. H. Sheldon, *Early American Cents, 1793-1814*, New York, 1949.

⁷ Review of Pink, p. 383.

least in part, permanent. They have been suggested before; they have never before been proved.

* * *

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I

That the four moneyers who issued the coins figuring in this study should be considered the members of one college has never been proved up to this time. The possibility that Publius Clodius, Lucius Livineius Regulus, Lucius Mussidius Longus,⁸ and Caius Vibius Varus were colleagues was explored years ago; Mommsen assumed them to form a college which he dated to the year 38 B.C.⁹ Later, however, in publishing the Vigatto hoard, he suggested that Regulus and Mussidius be dated to the college of 43, having as colleagues P. Accoleius Lariscolus¹⁰ and Petillius Capitolinus.¹¹ The main argument for the rearrangement was the want of any coin of Clodius or Varus bearing the portrait of Lepidus, while both Mussidius and Regulus were known to have struck with his head, indicating a production of coin in the early days of the Triumvirate.¹² An example of the missing Clodius

⁸ The *nomen* Mussidius will be used throughout, so that in the designation of the dies there can be no confusion between those of L(ongus) and those portraying L(epidus).

⁹ Th. Mommsen, *Geschichte des Römischen Münzwesens*, Berlin, 1860; p. 653.

¹⁰ For P. Accoleius and L. Ariscolus as two distinct moneyers see Alföldi, review of Pink, p. 388.

¹¹ "Römische Denarschätze. IV: Der Denarschatz von Vigatto." In *Zeitschrift für Numismatik*, II (1875) 66–8.

¹² The point is put clearly by Borghesi (*Œuvres Complètes*, Paris, 1862–4; II, p. 77): "Mussidio unil quel tipo alla testa di ciascuno dei triumviri [he refers to the reverse type of Mars standing—see below], mentre da Clodio fu preterito Lepido, Golziana essendo la medaglia non mai veduta da alcuno, che dicevasi portare il suo ritratto. E la ragione procederà dal tempo, nel quale da ognuno di loro fu amministrata la zecca: onde sul principio del triumvirato, quando la potenza di Lepido era eguale a quella dei suoi colleghi, osservasi onorato del pari dai monetieri Livineio e Mus-

piece with head of Lepidus was found three years later, in the Cajazzo hoard.¹³ Von Duhn concluded that Clodius must have been colleague to Mussidius and Regulus, accepting and confirming von Sallet's arrangement of the year before, which had grouped the three "and a fourth" together and dated them to 43 B.C.¹⁴ Von Duhn postulated the fourth to have been Caius Vibius Varus. Friedländer added, that which von Duhn had not known, that the Cajazzo hoard had contained as well the only known specimen of a portrait of Lepidus struck by Varus.¹⁵ The series were thereby complete: each moneyer struck for each *triumvir*.

Babelon followed von Duhn in accepting the four moneyers as one college, assigning them to 43–2 B.C.¹⁶ Bahrfeldt had already drawn the connection,¹⁷ and Mommsen had reverted

sidio; ma scaduto dopo di riputazione, e quasi relegato nell' Africa, fu poi negletto tanto dal nostro Clodio quanto da Vibio Varo." Yet von Sallet was not disturbed ("Die Münzen Caesars mit seinem Bildniss." In *ZfN*, IV [1877] 137): "Wir keine Münze des Lepidus vom Monetar Clodius besitzen, während die beiden andern genannten Quattuorvirn des Jahres 711, Mussidius Longus und Livineius Regulus für alle drei Triumvirn, Antonius, Octavian, Lepidus Goldstücke prägten; indeß ist bei der enormen Seltenheit aller dieser Goldstücke und besonders der Goldmünzen des Lepidus immer noch möglich, daß es auch einige wenige Stücke vom Monetar Clodius mit Lepidus' Bild gab und daß wir sie vielleicht noch finden. Es ist eine bekannte Sache, daß bisher unbekannte Goldstücke jener Zeit auch jetzt noch zu Tage kommen: ich erinnere nur an das Berliner Unicum mit dem Kopfe des Antyllus, das im zweiten Band dieser Zeitschrift publiciert worden ist."

¹³ F. von Duhn, "Münzfund bei Cajazzo." In *ZfN* V (1878) 236.

¹⁴ Loc. cit.

¹⁵ J. Friedländer, "Zum Münzfund von Cajazzo." In *ZfN* V (1878) 242.

¹⁶ E. Babelon, *Description Historique et Chronologique des Monnaies de la République Romaine*, Paris, 1885; p. 167. "M. W. Caland place leurs fonctions en 712 (42 av. J.-C.): ils sont en effet restés en charge pendant cette année, mais ils ont commencé à battre monnaie dès l'année précédente." Cf. W. Caland, *De Nummis M. Antonii III viri*, Leyden 1883; pp. 29–39.

¹⁷ Max Bahrfeldt, "Der Denarschatz von Pieve-Quinta." In *ZfN* X (1883) 18.

to his original opinion.¹⁸ But in England the effect of Count de Salis' historical and stylistic inquiries was to disregard the evidence of the Cajazzo find and the conclusions of the German scholars. Thus Grueber continued in the old opinion, separating the moneyers into two groups and dating them relatively late, Mussidius and Regulus to 39 B.C., Clodius and Varus to 38.¹⁹ De Salis too had seen that the portrait of Lepidus was unknown on the coins of Clodius and Varus, concluding that their coinage must have been later than that of Mussidius and Regulus. Yet Grueber, writing thirty-three years after the discovery of the Cajazzo hoard, could say, "The addition of these gold coins to the series does not, however, affect the general classification."²⁰ He apparently justifies his division by his own chronological arrangement of the hoard material²¹—itself a dangerous pit-fall—as well as the style or fabric of the coins. "There is certainly a remarkable resemblance in the character of the types and the issues of the gold and silver coins of all four moneyers, but those of L. Mussidius Longus and L. Livineius Regulus have certain characteristics not found in the money of P. Clodius and C. Vibius Varus, and *vice versa*."²²

Cesano followed Grueber in his dating, arguing that the reverse type of the gold struck for Antony by Clodius—the figure of "Pantheus"—could only refer "alla sottomissione ed al dominio pacifico dell' Oriente per opera di Antonio stesso," a work which must date to 39 and 38, if not later.²³

¹⁸ Th. Mommsen, "Der Denar des Q. Salvidienus und die Schätze von Peccioli und Metz." In *ZfN* XI (1884) 73-4, 79.

¹⁹ H. A. Grueber, *Coins of the Roman Republic in the British Museum*, London, 1910; I, pp. 573-88 (hereafter "Grueber"). De Salis assigned no more than two active moneyers to each of the years 43 through 37.

²⁰ I, p. 555.

²¹ I, p. cxiv; III, pp. 28-9.

²² I, p. 583.

²³ Lorenzina Cesano, "Contributo allo studio delle monete antiche dimezzate," in *Rivista Italiana di Numismatica* XXVIII (1915) 22-4.

In 1923, Bahrfeldt was able to refer to the coins of the four moneyers as “Die Münzen des durch die Funde von Cajazzo und Pieve-Quinta nunmehr ganz gesicherten Viermänner-Kollegiums.”²⁴ Pink too assigned all four men to the college of 42 B.C.²⁵ Yet again, the second and most recent English catalogue disperses the moneyers so as to date Musidius and Regulus to 42 B.C., Clodius to 41, and Varus still later to 39.²⁶ Sydenham’s catalogue includes relatively little discussion of the reasons behind an attribution; no argument is presented to sustain this division and dating. Mattingly, in a note on Sydenham’s arrangement, restates the other view: “C. Vibius Varus makes a fourth moneyer with Longus, Regulus, and Clodius in 43 to 42 B.C.”²⁷ Finally, Ulrich-Bansa has assigned to 42 B.C. a college composed of Longus, Regulus, P. Clodius Vestalis (*sic* — P. Clodius or C. Clodius Vestalis?), and L. Flaminius Chilo.²⁸

The point, it appears, remains to be proved one way or the other. It is evident that current opinion has tended toward two positions: 1) The four moneyers are to be dated together, as one college; 2) The college did not exist but the issues of the four are very alike. Even so with respect to the date of the moneyers: whether they formed a college or no, it is generally agreed that they struck either around 43/2 or about 39/8. Neither of the two familiar means of approach has succeeded in establishing the solution, although either

²⁴ *Die Römische Goldmünzenprägung während der Republik und unter Augustus*, Haale, 1923; p. 50 (hereafter “Bahrfeldt”).

²⁵ P. 43.

²⁶ Sydenham, pp. 180–6. One will remark how the distinction of a century ago—the association of Musidius and Regulus, *versus* Clodius and Varus—has lingered on, curiously, long after the reason for it, the dearth of portraits of Lepidus, was no longer valid.

²⁷ H. Mattingly, in Sydenham, p. 223.

²⁸ O. Ulrich-Bansa, “Introduzione alla Numismatica Romana (parte II),” *Rivista Italiana di Numismatica* LVI (1954) 60. Sydenham too assigns Chilo to 42 B.C. (p. 180).

might have suggested it. Grueber's reliance on non-numismatic evidence as a means of identifying, and thus dating, the moneyers breaks down here on his own admission. For three of the four officials are altogether unknown; for Regulus alone can he so much as hazard a guess.²⁹ On the other hand, Pink's arrangement of the four as one college is at least partly fallacious, as will be elaborated below, and stands ultimately only as long as his entire structure stands.

This study could marshal and examine the evidence, review the opinions of the past, and assert itself in support of one or the other. But no final solution would have been attained; the problem would still remain, to be attacked again and again. It would seem preferable, rather, to begin at the beginning, to attempt to approach the problem from an entirely new point of view, to invoke evidence never before considered, and to attempt to reach an answer without recourse to either the historical or the *Aufbau* method. Each of these will be invoked in its turn, but the method of this investigation is to be the study of the coins themselves. Considering them simply as metallic evidence of things past, we shall inquire whether they can reveal to us anything pertaining to the function of the moneyer or the pattern of the coinage which we do not already know.

²⁹ I, p. 573. "Of the moneyer Lucius Mussidus Longus, the son of T. Mussidius Longus, we know nothing but what we learn from his coins."

P. 583. "Of Publius Clodius, son of Marcus Clodius, we have no certain information beyond that he was one of a quattuorvirate of the mint."

P. 587. "Caius Vibius Varus is also only known from his coins."

P. 578-9. "Lucius Livineius Regulus, like his colleague L. Mussidius Longus, is not known to us from history, and our information about him is derived only from his coins, which tell us that he was the son of Lucius Livineius Regulus, the praetor, who, with his brother Marcus, was a friend of Cicero, and who appears to have served under Caesar in the African war, B.C. 46 (Hirtius, *Bell. Afr.*, 89)." Münzer, in PW XXV, cols. 808-9, takes the moneyer himself to have been the Livineius Regulus mentioned in Hirtius. So too Broughton, II, p. 581: "Praefect Hadrumantum 46." But there is no evidence whatever for either identification.

The coins to be considered represent only a fraction of the total output of their respective moneyers. All struck silver of private types.³⁰ In addition, Clodius, Mussidius, and Regulus issued portrait denarii of Caesar (as had the moneyers of 44, and Gracchus and Vitulus in 43); Clodius, Regulus, and Varus struck denarii portraying Octavian; while Antony was similarly honored on silver of Clodius and Varus. The purpose of these issues needs not be discussed here;³¹ the omission of Lepidus, less than a year after he had assumed the office of *triumvir r.p.c.*, shows clearly enough the real significance of his position.

The private types of each moneyer were peculiarly his own. The portrait coinage must then be the closest connection between the officials. But the series are not complete; Mussidius apparently struck no portrait of Octavian or Antony in silver. And while an argument based generally on style can be drawn to some fineness it involves a subjective criticism which may not be accepted everywhere. The comparison of these portraits by style will be considered incidentally below, but the argument is not strong enough to carry off the victory in the principle struggle: did these moneyers, or any two or three of them, pertain to the same college?

The story of the coinage in gold is much the same. Each moneyer struck private types; indeed all but Regulus struck two.³² Each moneyer also struck for the members of the Triumvirate, and in this case the evidence is complete:

³⁰ For the coins in general of the four moneyers, see Grueber, I, pp. 573–90.

³¹ On the problem of coin portraiture immediately following the death of Caesar, see A. Alföldi, "Porträtkunst und Politik in 43 v. Chr." In *Netherlands Year-Book for History of Art* V (1954) 160–3.

³² Bahrfeldt, nos. 30–7. The first type of Clodius, no. 30, with head of Apollo, is no longer to be thought unique. At least two other examples are known: 1. R. Ratto sale (Morcom-Hands), Lucerne, Feb. 8, 1928; no. 1016; 2. Glendining sale (V. J. E. Ryan), London, Feb. 20, 1951; no. 1562 = Ciani sale, Paris, May 6–7, 1955; no. 248.

portraits of each *triumvir* are known for each series. Therefore these gold series, five in all, are to form the subject of this study, and they may properly be presented at this point.³³

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| I. 38. ³⁴ M.LEPIDVS.III.VIR.
R.P.C
Head of Lepidus, l.
Dotted border. | C.VEIBIVS / VAARVS ³⁵

Two clasped hands.
Dotted border. |
| 39. M.ANTONIVS.III.VIR.
R.P.C
Head of Antony, r.
Dotted border. | as above. |
| 40. C.CAESAR.III.VIR.R.P.C
Head of Octavian, r.
Dotted border. | as above. |

The reverse type is clearly symbolic of Concordia: the reconciliation of the *triumviri* in particular, in general the renewed political stability of the state, more hoped for than actual. There may be here an attempt to recall the occurrence of the type on the denarii of Albinus and C. Vibius Pansa, and later on the quinarii of L. Aemilius Buca, under Caesar. Mussidius also struck denarii of the type of clasped hands and caduceus, with the head of Concordia on the obverse.³⁶

³³ A catalogue of the known specimens of each type will be found on p. 63.

³⁴ To simplify reference, the numbers assigned by Bahrfeldt have been retained throughout, and the types are generally referred to in the order which he used.

³⁵ This reverse type appears to have been entirely unknown, with any of the three portraits, before the discovery of the Cajazzo hoard in 1878. Although von Duhn and Friedländer (opp. citt.) list but three examples of number 40, it is probable that the fourth stems from that find as well. Considering the rarity of all the five series here to be discussed, an extraordinary number and variety occurred in the Cajazzo hoard. Von Duhn and Friedländer certify: no. 38 (1 example), 39 (3), 40 (3), 41 (1), 42 (1), 43 (3), 44 (1), 45 (1), 47 (1), 48 (2), 49 (1), 52 (1).

³⁶ Albinus and Pansa: Grueber, I, nos. 3964-5, 3987-8; Buca: I, no. 4162; Mussidius: I, no. 4236.

- The cornucopia is symbolic of the stability and fecundity to be expected under the new régime.³⁷

- ³⁷ For the cornucopia as symbol of the Fortune of Octavian, see A. Blanchet, "Monnaies de Lugdunum (*Copia*).³⁸" In *Revue Numismatique* series 5 X (1947/8) 121-2.

³⁸ "Concordia"—Grueber, I, p. 584; "Concordia (?)"—Sydenham, p. 184; "Weibliche Gestalt"—Bahrfeldt, p. 57. Felicitas seems not to have been previously suggested. The figure does not carry the caduceus as we might expect, but the omission is not unparalleled: cf., e.g., the sesterce of Titus in Mattingly, *Coins of the Roman Empire in the British Museum*, London, 1923—, II, nos. 156–160. Conversely, the caduceus is sometimes associated with Concordia: cf. the denarius of Mussidius, n. 36 *supra*. Felicitas has an especial meaning for Lepidus, for Caesar removed the remains of the Curia Hostilia, burnt in 52 B.C., and proposed a temple to Felicitas on the site of the old senate-house. But his death supervened, and the temple was completed in 44 B.C. by Lepidus (Dio xlv.5.2).

³⁹ "Owl?"—Grueber, loc. cit.; "Owl"—Sydenham; "Undeutlicher Gegenstand. (Tropaeon?)"—Bahrfeldt. The object remains obscure; Dr. Laurence Richardson suggests to me that it might be a wineskin lying on its side, complementing the cornucopia.

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| <p>45. M.ANTONIVS.III.VIR.
R.P.C
Head of Antony, r.
Dotted border.</p> | <p>P.CLODIVS.M.F / IIII.
VIR. A.P.F
Male figure⁴⁰ standing l.,
winged and radiate, hold-
ing caduceus in l. hand,
cornucopia in r., quiver
and bow across back, r.
foot resting on globe. At
his feet, r., shield, l., an
eagle upon a rectangular
or rhomboid object.
Dotted border.</p> |
| <p>46. C.CAESAR.III.VIR.R.P.C
Head of Octavian, r.
Dotted border.</p> | <p>P.CLODIVS / M.F.IIII. /
VIR.A.P.F., or P.CLO-
DIVS.M.F.IIII.VIR.A.P.F
Venus sitting l. on <i>cippus</i>,
holding dove in r. hand,
embracing Cupid with l.
Dotted border.</p> |

The significance of the reverse types of this series will be understood only when the figure on the coin of Antony is finally explained. Perhaps we are to take together Felicitas-Genius/Aion-Venus (of whom Concordia is a derivative)⁴¹ as

⁴⁰ "Genius"—Grueber, I, p. 582; and Sydenham, p. 184; "Pantheus"—Bahrfeldt, p. 58. The significance of the iconography has been the subject of some discussion, in part stemming from the attribution of the piece to 38 B.C. or later, a date which permits an interpretation involving Antony's role in Eastern affairs. For the literature up to 1923 see Bahrfeldt, p. 58, to whose list one might add Cavedoni, review of Cohen's *Médailles Consulaires*, in *RN* new series X (1857) 349; and Borghesi, II, pp. 72, 77–81. Alföldi, "Der neue Weltherrscher der IV. Ekloge Vergils," in *Hermes* LXV (1930) 369–84, interprets the figure as Aion, that is, the *saeculum frugiferum*.

⁴¹ L. Preller, *Römische Mythologie*, Berlin, 1883 (3rd edition, by H. Jordan), II, p. 260. That these three deities were associated on one festival day appears to be more than a coincidence, given the coin types. CIL I², p. 331 reproduces the calendar for October 9th: *VII ID. OCT. – C. Genio public(o), faustae Felicitati, Vener(i) victr(ici) in Capitol(io)*. (The phrase in *Capi-*

symbolic of both the stability and the fecundity of the new age, the new era of hope.

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| <p>IV. 47. M.LEPIDVS.III.VIR.R.P.C
 Head of Lepidus, r.
 Dotted border.</p> | <p>L.REGVLVS / IIII.VIR.
 A.P.F
 The Vestal Virgin Aemilia⁴² standing l., holding <i>simpulum</i> in r. hand, sceptre in l.
 Dotted border.</p> |
| <p>48. M.ANTONIVS / III.VIR.
 R.P.C.
 or
 M.ANTONIVS.III.VIR.R.P.C
 or
 M.ANTONIVS.III.VIR.R.P.C.
 Head of Antony, r.
 Dotted border.</p> | <p>L.REGVLVS / IIII.VIR.
 A.P.F
 Hercules⁴³ seated facing on a rock, holding sceptre in r. hand, in l. sword (or parazonium?). At his l. leans a shield with Gorgon's head.
 Dotted border.</p> |

tolio need not mean "on the Capitol," nor need it apply here to anyone other than Venus. Mommsen interprets the inscription correctly, loc. cit.; but cf. S. B. Platner, *Topographical Dictionary of Ancient Rome*, London, 1929 (revised, T. Ashby), pp. 206, 207, 247, 555.) Felicitas was appropriate to Lepidus as we have seen, Venus to Octavian. (The Venus of the coin is Venus Genetrix; but Genetrix and Victrix were often not distinguished: cf. Preller, op. cit., I, 443; II, 356-7.) Yet if there be here a reference to the Triumvirate, what could be the significance of the ninth of October? The date of the meeting near Bononia is not known, but it appears to have fallen at the end of the month or early in November.

⁴² The identification was fixed by Borghesi, I, pp. 329-32. Cf. Plutarch, *Romulus*, II. 3.

⁴³ "Mars"—Bahrfeldt, p. 59. But the lion's skin can be seen hanging down in the space between the rock and Hercules' legs. Grueber (I, p. 578) and Sydenham (p. 182) prefer Anton as the identification, which can hardly be attacked although it seems unnecessarily subtle. Although the sceptre and shield seem strange for Heracles, there appear to be no representations of Anton to establish his iconography. Cf. Plutarch, *Antony*, iv. 1, xxxvi. 4, lx. 3.

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|------------------------------|----------------------------|
| 49. C.CAESAR / III.VIR.R.P.C | L.REGVLVS / IIII.VIR. |
| or | A.P.F |
| C.CAESAR / III.VIR.R.P.C. | Aeneas advancing r., bear- |
| Head of Octavian, r. | ing Anchises. |
| Dotted border. | Dotted border. |

The reverse types of Regulus associate each *triumvir* with his forebears. Only Antony's coin bears the image of the god, but Venus is implied on the Octavian piece, as is Mars on that of Lepidus. The conceit is not original—Sulla's association with Venus, Pompey's with Neptune, Caesar's with Venus all preceded—but the implications are clear: the *triumviri* claimed justly the power of office, for the very gods had conspired to endow Rome with their services. Not only was a new age at hand, symbolized by the reverse types of the other moneyers, but the Fortune of the city was to be assured by divinity as it were made flesh.

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| V. 50. M.LEPIDVS.III.VIR.R.P.C | L.MVSSIDIVS.T.F.LON- |
| Head of Lepidus, l. | GVS.III.VIR.A.P.F. |
| Dotted border. | Mars standing r., holding |
| | spear in r. hand, para- |
| | zonium in l., his l. foot |
| | resting on shield. |
| | Dotted border. |
51. M.ANTONIVS.III.VIR.R.P.C as above.
Head of Antony, r.
Dotted border.
52. C.CAESAR.III.VIR.R.P.C as above.
Head of Octavian, r.
Dotted border.

The reverse type is that of Mars disarmed, signaling the cessation of war. Perhaps the Roman actually accepted the symbol, in the hope that the proscriptions had ended once for all the divisions in the state. But one is reminded of the types of Hilaritas, Securitas, and Concordia, so common in

the third century A.D., occurring most often precisely at those times when they meant the least.

The obverse legend is constant for the *triumvir*, the only varieties consisting in punctuation and spacing. All are read inward, and all begin at the lower left save for those of dies O.III and O.IV⁴⁴ which begin upper right. The reverse legends begin at various points and are all read across or inward, except for those of dies C.Aa, C.Ba, and R.Bo which are read outward. It is to be noted that the reverse legends vary: Varus never includes IIII. VIR. A.P.F, Clodius and Regulus always do, Mussidius does in the one series but not in the other. The position of the dies usually approximates ↑↑ or ↑↓—rarely ↑← or ↑→—but the dies were not fixed.

Granted that all the coins described above portray all the *triumviri*, one may yet inquire what justification can be offered for the joint consideration of several series of coin struck by moneyers who may very well not have been colleagues. The answer is that, in the first place, the obverse types, the portraits, are not common in series; a series of coin portraying each of the *triumviri* is known in only one other instance. We have a group of aurei, certainly not struck at Rome and attributed by Grueber and Sydenham to Gaul, which falls into two parts.⁴⁵ The first consists of those coins bearing the portrait of Antony on one face and Lepidus on the other, the second, of Antony on one face and Octavian on the other. The aurei are quite rare—no denarii of these types are known—and no other series can be found which portrays all the *triumviri*. Returning to our gold, it seems inherently unlikely that several moneyers at random, over a period of years, should have hit on the idea of striking these types in series. They much more reasonably must have struck together.

⁴⁴ For the scheme of die identification, see below note 48.

⁴⁵ Grueber, II, nos. 46–7; Sydenham nos. 1161–2.

Nor need we rely on a conjectural, or even a stylistic comparison, for a closer connection than type or style has been discovered between the series. The *terminus* from which we depart was suggested thirty years ago by Bahrfeldt. In assembling and arranging the material for us to use, Bahrfeldt discovered a coincidence of cardinal importance: these moneyers, in their gold coinage for the *triumviri*, in some cases made use of the same obverse portrait dies. "Die für Lepidus von Varus und Longus geprägten Goldstücke n. 38, 41 u. a. sind von stempelgleicher Hs., also müssen sie in derselben Münzstätte und auch zu derselben Zeit geschlagen worden sein!"⁴⁶ "Für jeden der drei Machthaber wurde gesondert geprägt, dabei wenden Vibius und Mussidius für alle drei dieselben Rs.-Darstellungen an, während Clodius und Livineius wechseln. Die vielfach vorkommenden Stempelgleichheiten beweisen, daß alle diese Münzen gleichzeitig und in einer und derselben Münzstätte, nämlich in Rom, ausgeprägt worden sind."⁴⁷ Sydenham apparently knew nothing of this die coincidence, for it would seem to invalidate his dating altogether. Yet one might argue, and it would be impossible at this point to disprove, that a number of dies might have been left over at the mint, to be used in some later year by another moneyer. That is, although it be very likely that the sharing of one die by two moneyers indicates that they struck in the same college, yet the coincidence is of itself no certain proof. Some further evidence would be welcomed.

⁴⁶ P. 50.

⁴⁷ P. 55.

II

Once the study of die linkage is undertaken as a method of chronological arrangement, one must pass beyond the stated coincidences. To ascertain not only which coins shared a given die, but the order in which they struck, would be a long step toward the solution of the problem. Although no one of the moneyers would be dated to any given year, their relative order might be established. For this reason an exacting study of the dies was undertaken. All the coins attributed in the Catalogue to New York, London, Rome, the Vatican, and Naples were studied in the original specimen. Casts were obtained of those in Glasgow, the Hague, Paris, St. Florian, Vienna, and Budapest, as well as nos. 41.6, 44.1 and .2, 47.11 and .12, and 48.7 and .14. The remaining specimens, about one quarter, were studied through photographs. Each coin was examined in the most minute detail. The progression of faults and breaks of each die was charted to reveal the chronological sequence of the coins struck from that die. The study was not always successful: in some cases the coins could be separated only into groups, not classified individually. In a few cases, particularly with respect to reverse dies, no separation was possible. But usually some distinctions could be drawn.

When each die had been individually considered, the reverse dies were studied together. Something of the mint organization might be revealed by their sequence. Clearly, reverse dies could not have been traded about between the moneyers, for they were the signature dies; they could not indicate ties between the officials. But they might indicate how each official worked. Several dies offer us no information, either in not exhibiting progressive damage—e.g.

M.Ec⁴⁸—or in being paired with only one die, itself not found elsewhere—e.g. R.Bo—or in occurring on but a single example—e.g. A.VII. These dies will not be discussed below, save for the reverse dies of Varus, *exempli gratia*.

The reverse dies of C. Vibius Varus are of no assistance. The coins are too rare at present—we have only eight examples of this series for the *triumviri* together—and the die arrangement is indecisive. Die V.A was employed with one portrait die of Lepidus and one of Octavian. In either combination the breaks of V.A are the same, when the area in which they occur is not off the flan altogether. Die V.B occurs only with one portrait die of Antony. Only one stage in the life of the die can be assumed for the three examples which we possess.

The reverse dies of L. Mussidius Longus with cornucopia as type are more revealing. The known examples of reverse M.Ac show clearly that obverse O.II was struck with this reverse before obverse A.II. Moreover, die M.Bc began, insofar as our examples can indicate, with obverse A.III as mate, followed by O.II. The damage suffered by the reverse under the hammer marks the progression clearly. The latest pieces are struck with L.IV and, again, A.III. Similarly in

⁴⁸ The reader will wish to consult the two tables below, pp. 45 and 54, for the linkage and the chronology of each obverse and reverse die. It must be observed that the die designations are, for the moment, completely arbitrary. The obverse dies are identified by the initial of the *triumvir* and a Roman numeral: e.g., the four portraits of Octavian are given as O.I through O.IV. The reverse dies are identified by the initial of the moneyer—V(arus), M(ussidius), C(lodius), and R(egulus)—and a capital letter. Thus, Varus' two reverse dies are V.A and V.B. Since two series were struck by Mussidius, a third, minuscule letter distinguishes between them: M.Cc is the third die of Mussidius in the cornucopia series, M.Am, the first in the series with Mars reverse. Both Clodius and Regulus used especial reverses to suit the individual *triumvir*: R.Bo designates Regulus' second die for Octavian, R.Ca, his third die for Antony, C.Al, Clodius' first die for Lepidus. The designations "first die" or "third die" are arbitrary and have as yet no bearing on the chronological arrangement of the dies.

the case of reverse die M.Cc, the occurrences of obverses L.V and O.I intertwine in time.

The second series of Mussidius, nos. 50–2, with Mars as the reverse type, offers a similar variation in the pairing of obverse dies. The gold struck to both M.Am and M.Bm may present examples of the random selection of obverse dies, as did those of M.Bc and M.Cc above. Until it is possible to divide the coins into smaller groups their exact sequence cannot be established. Certainly the pieces struck from die M.Bm appear to have been struck first to the portrait of Lepidus, then to that of Antony, and finally to the head of Octavian. A further point of importance is to be noted: the sequence indicates that obverse portrait A.I, in some cases at least, was used before A.II, an element to be considered below in establishing the overall sequence of obverse dies. The evidence of reverse die M.Am exactly contradicts that of M.Bm; the sequence of obverse portraits begins with Octavian, continues with Antony, and ends with Lepidus.

The reverse dies of Publius Clodius add little to the study up to this point. None of them occurs with the portrait of more than one *triumvir*, for the reverse type was cut with reference to the obverse die. Even within these limits only one sequence can be demonstrated. Die C.AI, of which we know only two impressions, was used with, at least, two Lepidus portrait dies. In this case die L.I was employed before L.II. The two reverse dies cut for Antony, as well as the two for Octavian, occur each with only one obverse die.⁴⁹

⁴⁹ The paucity of this series of Clodius' gold is the more to be regretted in that the reverses cut for Octavian are of the finest workmanship. Die C.Ao is an example of the best in Roman die engraving of the period. The technique is impeccable: the relief is high, the figures finely proportioned. And, more important, the concept is impeccable. The type is designed to adorn a circular field, it is not cut at random. The curve of Cupid's wing and Venus' head exactly parallels the border of dots. The artist has emphasized the primary importance of the harmony of type, legend and border by breaking the legend at an unexpected point, the better to fit it into the

Finally, the reverse dies of L. Livineius Regulus. Again, only one of the seven dies is known in combination with more than one portrait die.⁵⁰ Reverse R.Ca occurs with three, Antony portraits A.IV, A.V, and A.VI. Clearly A.VI was the latest to be paired with R.Ca, in two cases at least. Whether the point can be made in the third case, for no. 48.5, is not clear, nor is the relative dating of dies A.IV and A.V yet established.

Thus far only the production of the individual moneyer has been presented; no connections between the officials have been established. These connections will present themselves with the consideration of the portrait dies of the *triumviri*. The five series of gold consumed in all, as far as we know, seven portrait dies of Lepidus, seven of Antony, and four of Octavian. Of the total of eighteen, five were used by more than one moneyer:

- L.IV: 38.1 (Varus)—41.1, .2, .7 (Mussidius/cornucopia)
- A.I: 45.1-5, .7-9 (Clodius)—51.1, .3-7, .9 (Mussidius/Mars)
- A.II: 39.1-3 (Varus)—42.4, .7, .9 (Mussidius/cornucopia)—51.10, .11 (Mussidius/Mars)
- O.I: 43.2, .3, .8 (Mussidius/cornucopia)—46.1, .2 (Clodius)
- O.II: 40.1-4 (Varus)—43.1, .4-7, .9-10 (Mussidius/cornucopia)—52.1-7, .10-13 (Mussidius/Mars).

Bahrfeldt himself compared a part of the coins which he

whole. (Cf. the reverse of the Concordia-Cloacina denarius of Mussidius [Grueber, I, nos. 4242-7]: the type is overpowered by the legend. Cf. also reverse die R.Bo: the legend is artificially forced about the figures so as to deny the circular nature of the field.) Unfortunately, the single coin known from die C.Ao is badly battered and holed as well.

⁵⁰ Actually, reverse R.Al is found not only with all the examples of Lepidus' portrait L.VI, but with the single impression of L.VII (no. 47*bis*) which I omit from this discussion. See the note to that number in the Catalogue.

listed, so that he was able to account for about half of the above links.

Portrait die L.III is found only in the Mussidius series with Mars reverse. Four examples are known, with which appear three reverse dies. The order of the moneyer's signature dies may here be traced from the obverse damage: M.Am was the first to be used, M.Cm the second, and M.Bm the last. If this order can be shown to be consistent, this evidence may in its turn determine the order of other portraits struck to one or more of these reverses.

The fourth portrait dies of Lepidus occurs with but two reverse dies, V.A and M.Bc. The correct order of each moneyer's signature dies will be considered below; that is not to be found here. There is no doubt, however, that in this case at any rate Varus used the portrait die before Mussidius. After Varus had struck the one example which we possess, the die broke between the forehead of Lepidus and the legend, and that break is to be seen on the three examples struck by Mussidius. Immediately Grueber's chronology is wrong, for he had dated Varus to the year after Mussidius' term of office. Similarly, Sydenham's dating, Mussidius to 42, Varus to 39, cannot be accepted.

Die L.V occurs with two Mussidius reverses of the cornucopia type, M.Cc and M.Ec. The obverse damage makes clear that the two dies were used in that order. The coins struck from L.VI are relatively common, but the reverse die is the same in all cases, R.AI.

The portrait dies of Antony are equally helpful. Die A.I occurs in two series, those of Clodius and Mussidius with Mars as reverse type. Two reverse dies of Clodius were paired to the portrait. Unfortunately, only the British Museum example of the first pairing, A.I and C.Aa, can easily be read; the only other piece known is illustrated in Riccio's catalogue, whose electrotpe impressions are too crude for more than simple recognition. The one legible example was clearly

struck before the remaining Antony pieces produced by Clodius, which bear reverse die C.Ba. The latter form a group which cannot easily be broken down into smaller segments.

All the examples of A.I with a reverse die of Clodius preceded those with the signature of Mussidius. On the coins which we have the line of demarcation is very clear: on all the examples signed by Clodius the area enclosed by the upper parts of the letters NIV, on the obverse die, is totally corrupt. All save no. 45.7 have a clean break from the upper curve of the final C to the dotted edge. In the later series the first massive break has been repaired. Some traces remain, but two new breaks are now to be seen between TO and ON. The area about the end of the inscription has also been reworked to remove the break observed there: note that on the nos. 45 the dotted edge contains four dots from immediately above the vertical of P to above the upper tip of C. When this area was reworked the dotted edge was cut anew, so that five dots appear in the place of four on all the examples struck by Mussidius from this die.

Antony's portrait A.I was paired by Mussidius with three reverse dies, M.Am, M.Bm, and M.Cm. Again, as in the case of the reverses of L.III, M.Am is earlier than M.Bm. The position of M.Cm is not clear, for the die was apparently used concurrently with M.Bm.

The above evidence demonstrates that a second of Grueber's datings must be rejected, for Mussidius is assigned to 39 B.C. in his catalogue, Clodius to 38. In accordance with the destruction of die A.I, Clodius must have struck his series of gold honoring the *triumviri r.p.c.* before the production of the Mussidius series with Mars reverse. So too Sydenham's arrangement is in error; it is not possible to agree that Mussidius struck in 42, Clodius in 41.

Die A.II is found in three of the five series, the Mussidius series with Mars reverse, the Varus coinage, and the Mussidius series with cornucopia reverse. Only one reverse die is

found in combination with A.II from each series. The evidence confirms that which is presented above under L.IV, that Varus can no longer be dated later than Mussidius.

Die A.III is found only in the Mussidius series with cornucopia reverse. It appears with three reverse dies, M.Bc, M.Dc, and M.Ec, in that order. The latest examples, nos. 42.2 and .6, are again struck from a pairing of A.III and M.Bc. This is one of only two cases in the five series of the recurrence of a reverse die; the other lies in the combination of A.I and M.Bm.

Obverse die A.IV is known in eight impressions, six of them with Regulus' reverse R.Ba. The latest of the eight, no. 48.9, bears reverse R.Ca, thus establishing the relation of those two signature dies. The reverse of no. 48.14, die R.Aa, is otherwise unknown. It clearly preceded some of the examples of R.Ba, and probably should be taken as the earliest reverse of its type.

Die A.V is found on only one coin; from its reverse die, R.Ca, it was determined above that it preceded at least two examples of A.VI. Portrait die A.VI occurs only with reverse R.Ca, the consideration of which demonstrated that this obverse must have followed A.IV.

Of the four portrait dies of Octavian, O.I is shared by two moneyers, Clodius and Mussidius in the cornucopia series. Only two coins are known of Clodius' production for Octavian, each with its distinctive reverse die. The reverse dies, of course, occur nowhere else, and the condition of the obverse in each case is not sufficiently distinctive to allow an opinion as to the priority of the striking. Both coins fall before the pieces struck by Mussidius from this obverse. In this group only one pairing occurs, with reverse M.Cc.

Die O.II is found in three series, first with the Mussidius reverse bearing Mars as the type, latterly with a die of Varus and both Mussidius types. This large second group can be no further reduced—die O.II was unusually sturdy—but the

overall pattern follows that set above in the consideration of portrait A.II: some of the coins struck to Mussidius' Mars type are earlier than both the Varus pieces and the Mussidius cornucopia specimens. Whether or not one wishes to date all the Mussidius Mars reverses before the remaining types, that arrangement obtains in at least a number of cases, and we have found no evidence to contradict it.

With respect to the reverse dies paired with obverse O.II, the three earliest specimens occur with M.Am, while the coins of this series in the second group are all found with M.Bm. The evidence of L.III and A.I above, that this was the order of consumption of the two reverse dies, is here confirmed. The Varus reverse is the same in all cases, V.A. The usage of the cornucopia dies of Mussidius, M.Ac and M.Bc, cannot be disentangled at this point.

III

The material in the foregoing chapter having been assembled, it now becomes possible to render an assessment of it, in the hope that some conclusions of fact can be reached which will surpass the suppositions of earlier years. Let us begin with the sequence of the signature dies of each moneyer as established by the corruption of the obverse dies.

Varus' two reverse dies are never paired with the same portrait, so that no sequence can be established. But three lines can be traced in the Mussidius series with cornucopia reverse. First, obverse die A.III established that reverse M.Bc was followed first by M.Dc, then by M.Ec. M.Bc appears a second time after M.Ec. Second, reverse M.Ec was also preceded at some point by die M.Cc, as obverse L.V proves. M.Cc, however, must follow M.Bc, for the latter is not found paired with L.V as are both M.Cc and M.Ec. Third, reverse M.Ac is one of the earliest of the series, for it is paired to O.II even as is M.Bc. There the order of the two reverse dies cannot be determined. But since M.Bc precedes M.Dc and M.Ec, then M.Ac must precede them as well. But M.Bc, M.Dc, and M.Ec are all struck to obverse A.III, while M.Ac was paired with A.II. Therefore M.Ac precedes the lot. The final stemma of the cornucopia dies then should be: 1. M.Ac; 2. M.Bc; 3. M.Cc—M.Dc; 4. M.Ec; 5. M.Ac *bis*.

This is not to imply that M.Cc and M.Dc were necessarily used concurrently. That the dies tend to fall into a one by one sequence opposes such a conclusion. But it is hardly safe to attempt to reduce the stemma any further. This sequence, established by the examination of the portraits, is confirmed by the style of the reverse types. For the two earliest cornucopiae are delicate and graceful, while the lower tips curve

back to the left and terminate no farther to the right than the axial line of the whole. The cornucopiae of M.Cc and M.Ec have deviated from this standard: the body is rather larger than need be, and the whole is thrown off balance in that the tip curves much too far to the right. The dumpy and graceless cornucopia of M.Dc is even worse.⁵¹

One conclusion to be drawn from this evidence is, that the striking was not organized from the obverse portrait. That is, we might have assumed that any authority claimed by a moneyer was but nominal. We know that the *aerarium* must have been primary in the thoughts of the *triumviri*—even thus Caesar had seized it as one of his first acts on entering Rome⁵²—and that the power of coinage now depended directly from them, rather than from the senate and the magistrates. One indication of such authority would have been the production of coin according to the portrait die; as long as Antony's image was to be seen, any moneyer could have signed his name on the reverse. A group of Antony gold would be struck with whatever reverse dies, in any order or at random, followed by an issue of Lepidus coins or Octavian pieces.

But the evidence of the cornucopia dies is that the case was just the opposite. A chronological arrangement of the coins struck from dies M.Ac, M.Bc, and M.Cc has been erected. But the corresponding obverse dies seem almost to have

⁵¹ Prof. Alföldi has already attested the deterioration in portrait engraving which confirms his chronology of the coins of 44 B.C. (*Studien über Caesars Monarchie*, Lund, 1953).

⁵² Dio xli.17.1–2, *inter alia*. In the days of private armies, the role of commander was too heavy a burden financially for any private citizen. Thus Octavian, having occupied Rome in 43, had to distribute 2500 denarii per man to his eight legions, a total of some four hundred million sesterces. Each soldier received the equivalent of 805 grammes of gold, a considerable amount of money even today. This was probably the occasion of the gold coinage of Ti. Sempronius Gracchus and Q. Voconius Vitulus (see Alföldi, "Porträtkunst," pp. 164–6).

been used at random. Why would a worker strike with O.I, for example, put it aside in favor of L.V, and then take it up a second time? That such a sequence was followed is the testimony of reverse die M.Cc. Perhaps the worker drew an obverse die at random as he began each day's work. Or perhaps there was consciously an attempt to balance the number of coins struck with the portrait of each *triumvir*. But in any case, the reverse die, the moneyer's signature die, was the limiting element, not the portrait. Ultimately monetary control must have ascended to the *triumviri* themselves; no order of coinage would change that. But in the mint itself, in the process of striking, the moneyer must still have filled a position of some responsibility, for the coins of each are struck first to his signature. That the position of the moneyer did not change under Caesar⁵³ or under the *triumviri* ought to be sufficient to show that the responsibilities of the office were not initiative.

The reverse dies of Clodius vary in type with the *triumvir*, so that a stemma ought to be established for each. But only one reverse is known to have been struck to the portrait of Lepidus, while the two dies cut for Octavian cannot be ordered chronologically by the damage done to obverse O.I. In the case of the dies cut for Antony the results are clearer. The breaks in A.I show that C.Aa was earlier than C.Ba; had either been paired with any other obverse the evidence might have been more profitable.

The reverse dies of Regulus, as those of Clodius, were designed for the individual *triumvir*, so that again their significance is limited. Only one reverse is known for the Lepidus gold, which itself knows but one portrait, save for the curious bronze, no. 47 *bis*. The reverse of that piece is in no con-

⁵³ Caesar, we are told, made use of *peculiares servos* in the mint (Suetonius, *Divus Julius* lxxvi.3) in addition to having enlarged the college from three to four (cf. *ibid*, xli.1). Undoubtedly the *servi* were to keep an eye on the moneyers, but legally they had no significance.

dition to allow a comparison with the reverses of the gold coins. Two reverse dies occur for the Octavian coinage; again, each is struck with its own obverse which is not found elsewhere. The Antony coinage offers more variety. Portrait die A.IV indicates that three of the four reverses fall into the stemma: 1. R.Aa; 2. R.Ba; 3. R.Ca. The fourth reverse die, R.Da, occurs only once, on no. 48.10, with an obverse impression which is itself unique.

Finally, the reverse dies of Mussidius with Mars as type fall into a clear pattern. Obverse L.III establishes the order M.Am, M.Cm, M.Bm. The precedence of M.Am over M.Bm is confirmed by both portrait dies A.I and O.II. But in the former case the position of M.Cm is not secondary but tertiary. From the evidence of the obverse breaks it appears that the stemma must have been: 1. M.Am; 2. M.Bm; 3. M.Cm; 4. M.Bm *bis*.

* * *

When the reverse dies have been ordered, to the extent that is possible, the sequence of the portrait dies becomes considerably clearer. Since Mussidius' cornucopia dies M.Ac and M.Bc are the earliest of that series, it must follow that Octavian portrait O.II, paired with each of the two reverses, preceded in use—again, in this series—obverse O.I, which occurs only with M.Cc. Similarly, portrait L.IV, struck only with M.Bc, was utilized before die L.V, which was paired with reverses M.Cc and M.Ec. Finally, since M.Ac preceded M.Dc and M.Ec, the portraits of Antony to which they were struck must share that order: A.II is earlier than A.III.

The two coins of Lepidus struck by Clodius bear two differing portrait dies. The damage done to the reverse die, C.A1, establishes that obverse L.I preceded L.II. The coins of Clodius produced for Antony are all struck to the same obverse die, as are those of Octavian.

The only group of Regulus' coinage which permits examination are the pieces struck for Antony. Both reverses R.Aa and R.Ba are paired with obverse die A.IV, so that it preceded the other two found with R.Ca, dies A.V and A.VI. Although all three comprise the earlier group of gold under R.Ca, the later coins were struck from A.VI. Now one would expect that a portrait die would not recur. That die was in higher relief than the reverse, the more difficult to cut, and probably the lower and better protected of the two dies when in striking position—there are more of the reverse dies, for one thing. Each obverse surely was used until nothing more could be done with it: the niggardlyness of the moneyer or the indolence of the engraver is illustrated by the repair of obverse A.I, as well as the lamentable state of the dies on the latest examples struck from L.V and, again, A.I. If these considerations be correct, the first group of coins listed under R.Ca should be broken up so that A.IV precedes, A.VI follows, and the stemma is: 1. A.IV; 2. A.V; 3. A.VI.

Finally, the Mars series of Mussidius establishes that Antony's portrait die A.I preceded A.II. To be sure, M.Bm occurs twice in the stemma, but its own breaks indicate that A.II was the later die in use.

It has been shown that when each moneyer produced his gold, no effort was made to strike to the portraits in any order. Thus, reverse die M.Bc was paired with obverse A.III, then with O.II, and finally with L.IV and A.III again. The only limitation seems to have been that the same three portrait dies were employed as long as each was usable. It should, then, be possible to trace the order of each moneyer's production in the college or colleges by the obverse dies, whether their dies were thrown together in a jumble, or whether each official had completed his coinage before the next began. Again the evidence is not always complete, for not every coin could be classified individually, but it is never contradictory.

The chronology of obverse dies determined above by reverse breaks is exactly confirmed as one traces the dies passing among the moneyers. All three portraits used by Varus—let us begin with Bahrfeldt's order—were used by Mussidius, two of them in both of his series. Bahrfeldt himself noted the one break which proved no. 38.1 to have been struck before nos. 41.1–.2, .7, break no. 3 under Lepidus portrait L.IV below.⁵⁴ Thus some, at any rate, of the cornucopia series struck for Lepidus were proved later than the *unicum* of Varus. The other examples of no. 41 were struck from obverse L.V. But it has been shown above that the stemma of Mussidius' cornucopia dies proves L.IV to have been used before L.V. Therefore all the Mussidius cornucopia coins struck for Lepidus are later than the Varus piece.

Even this step does not prove the independence of Mussidius' coinage; one must consider the coinage by Varus and Mussidius for Antony and Octavian. In fact, obverse A.II tells exactly the same tale: all three examples produced by Varus are earlier than the pieces from the same die in the cornucopia series of Mussidius. Again, the other coins of Antony in this series were struck with portrait die A.III, which by virtue of the stemma of cornucopia dies established above must have been in use after A.II. Portrait O.II cannot help us. Most of the coins struck from this obverse cannot be distinguished *inter se*; those of Varus are at any rate not shown to be later than the Mussidius pieces of cornucopia reverse.

Two of Varus' obverse dies, A.II and O.II, are also to be found in the Mussidius series with Mars' reverse. Portrait O.II is here a bit more helpful, for in spite of the difficulty in

⁵⁴ "Stempelgleich: . . . n. 41. u. 2 und Exemplar Montagu, sowie hiermit die Hs. vom Goldstücke des C. Veibius Vaarus oben n. 38. Eine auf letzterem vorhandene kleine Stempelverletzung erscheint auf den Mussidius-Goldstücken vergrößert, also sind diese später geprägt, als das des Vibius!" (p. 56).

distributing the coins it is clear that these Mussidius pieces were produced earlier than the Varus coins from the same die. The portrait of Antony, A.II, makes the same point as definitively.

Thus the results of the treatment of portraits L.IV, A.II, and O.II are rather unexpected. Mussidius' cornucopia series as a whole followed the coins struck by Varus, as Bahrfeldt noted for one case. But Bahrfeldt implies, by the manner in which his material is arranged, that the Mars series of Mussidius was later still. The contrary is true: not only do the latter pieces precede the cornucopia series, they precede as well the coinage of Varus.

Clodius struck with four obverse portraits. Two of them are shared, A.I with Mussidius in the Mars series, O.I with the same moneyer in the cornucopia series. In either case the Clodius pieces are found to be the earlier. But since the Mars series is the earliest of the three discussed above, the Clodius coinage must precede them all. Portrait die O.I is noted to be the only obverse die which reappears after its substitution by another, for between its two appearances occurs obverse O.II under Varus and in both series of Mussidius.

The stemma of obverse dies as employed by these three moneyers is then established, and the order in which the four series were produced is absolutely certain:

	Lepidus	Antony	Octavian
1. Clodius	I II	I	I
2. Mussidius/Mars	III	I II	II
3. Varus	IV	II	II
4. Mussidius/cornucopia	IV V	II III	II I

* * *

Having arrived at this point, one may be concerned to note that Regulus is omitted from the stemma. A chronology of obverse dies ought to be constructed for his coins even as for those of the other three moneyers. The two Lepidus portraits cannot be separated in time, for that which appears only on the bronze is paired to a reverse impression too badly preserved for study. Of the four Antony portraits, three were ordered above in the consideration of reverse R.Ca. The fourth, A.VII, is known in but one example, paired with a reverse itself unique, so that it must fall outside the scheme. Finally, each of the two portraits of Octavian is struck to a single reverse, which permits no argument of priority. The stemma of the obverse dies used by Regulus is, then:

Lepidus	Antony	Octavian
{ VI	1. IV	{ III
{ VII	2. V	{ IV
	3. VI	
	plus VII at some point.	

The curious fact is that Regulus shares no portrait die with any of the other three moneyers. Apparently Bahrfeldt missed the point, for he implies that the interchange of dies was general.⁵⁵ Actually there is not a single case of die correspondence. One may argue that the material is weak—as assuredly it is—or that the dichotomy is merely coincidental. But the gap is even wider: save only for one case even Regulus' die engravers differ.

The first two of the three portraits of Antony used by Clodius, Mussidius, and Varus are both clearly the work of one hand and indeed are almost identical. The third die chronologically, A.III, bears rather a better portrait. The relief is higher, the eye is more nearly in profile than before, the forward edge of the nose is cut rather than simply

⁵⁵ See above, p. 13.

traced. The portrait of A.III seems to be by the same hand as those of A.I and A.II, but the concept is more plastic, the hand more confident. The portrait of A.III should then be compared with that of O.II: both heads are spherical, while the treatment of hair, eye, and ear indicate the same engraver.

The five Lepidus dies in the stemma can be broken down by style into three groups. Those used by Clodius, L.I and L.II, were cut by one hand. The head is rather long for its height, the treatment of the hair at the back of the head is linear, the neck and chin are separated by a deep cut. Dies L.III and L.IV are the work of a second artist. The head is rather square, the treatment of the hair is plastic, the chin and neck are molded together. Die L.III is the more successful in the profile view of the eye. Finally, the portrait of obverse die L.V is small, in high relief, representing a round head with a deep Scopaic wrinkle in the forehead. The three hands can equally be distinguished by the cut of the lower edge of the bust: the first engraver cuts two small indentations upward but overall the line is almost straight; the second engraver emphasizes the second indentation so that the lower right point of the bust curves downward; the third abandons the indentations for a single dramatic swoop upward.

None of the above dies—that is, all of the stemma save O.I—was cut by any engraver who cut a portrait for Regulus. Three artists worked under Regulus in this series. The first cut the two Lepidus, the two Octavian, and the best of the four Antony portraits, A.IV. The sensitive portraits are by far the finest of all the obverse dies. One may object that the head of Lepidus is much too young for a man approaching his fiftieth year. But the heads are cut with delicacy and feeling, the hair is handled with care to preserve its plasticity, the eye is always correctly cut for the profile. All are in comparatively high relief. No better portrait of Lepidus

exists; that of Octavian was surpassed only after Actium when the concept of his portrait had changed entirely;⁵⁶ that of Antony is challenged only by the head of the unique aureus of Antony and Octavia in the Berlin collection.⁵⁷

Two other hands are seen in the portraits of Antony produced for Regulus. Die A.VI is rather well cut technically, but the quality of the portrait is less than that of A.IV. The back of the head is somewhat misshapen, and the bust below is out of balance; for the right point is so lightly cut as to fade away, while the left is distinctly presented. Still, the lower part of the bust is reminiscent in style of the fine portraits mentioned above: perhaps we have here a product of the same engraver on an off-day. The third (or second?) hand cut two monstrous portraits of Antony, dies A.V and A.VII. The head is small and round, the eye too large and incorrectly cut for the profile view, the nose large and awkward. The relief of the whole is low.

A complete dichotomy between Regulus' dies and those of the other three moneyers is averted at just one point. For although Regulus never strikes with a die used by any of the other moneyers, the artist who created his fine portraits also cut obverse die O.I. The latter is more finely cut and more realistic in effect than its companion die, O.II; indeed the portraits of O.I and O.IV are almost identical. Thus, although the stemma of obverse dies excludes the coins of Regulus, the identification of a common engraver, as well as the historical considerations presented below, permit us to continue to inquire whether Regulus might not have been the colleague of Clodius, Mussidius, and Varus.

⁵⁶ The later head is a young, idealized portrait. Cf. e.g., Bahrfeldt nos. 104 to 9. The problem of the change in Augustan portraiture is treated by Josef Liegle, "Die Münzprägung Octavians nach dem Siege von Actium und die augusteische Kunst," in *Jahrbuch des Deutschen Archäologischen Instituts* LVI (1941) 91-119.

⁵⁷ Bahrfeldt no. 88.

IV

It has been indicated above that the fact that a die link exists between two moneyers does not limit them to the same college.⁵⁸ Even when the investigation of the die faults is successful, only a relative chronology is the result. To prove that moneyer A used die X before moneyer B still does not date the two men to the same year. A may have struck a day or a decade before B. Ultimately, the only way to prove the point is somehow to show that A struck both before and after B. They must have coined in some manner so as to overlap. Only then are they assuredly and beyond any question colleagues.

The evidence now is clear that each of the series of gold under discussion is self-contained, each was struck individually. But fortunately for us, Mussidius rested from his labors and permitted Varus to coin in the interval between the two series with Mars and with the cornucopia as reverse types. Varus and Mussidius, then, are proved to have been colleagues. Neither Grueber nor Sydenham can be followed in this question any longer. The coins themselves have solved the problem once for all.

Clodius is not yet assuredly a colleague of the other two. His series of gold preceded theirs; that is proved. Theoretically, however, he might have coined a year or two earlier. The answer to this cavil is the consideration of the date of the college to which Varus and Mussidius pertained.

The *terminus post quem* for the production of the gold under discussion is obviously the date of the Lex Titia,

⁵⁸ A good deal of the hybrid coinage of the Empire was produced from dies which ought to have been cancelled but which were retained in working condition at the mint.

November 27, 43 B.C. Before that date the Triumvirate had no legal existence, so that the obverse legend would be impossible. The *terminus ante quem* is the battle of Naulochus and the defeat of Sextus Pompey in September, 36. For after the victory Lepidus committed himself to the delusion that his second-rate status as primate of Africa, fobbed off on him after Philippi and at Brundisium in 40, could be ameliorated only by open defiance of Octavian. But Caesar's heir invoked once again the dramatic flair which recalled his father, Lepidus cowered and begged forgiveness, and the Triumvirate became for all practical purposes a Duumvirate.

But the latest date for our gold can be set back still further. The Triumvirate had lasted, legally, for five years, 42 through 38 B.C. When the term of office had expired no one dared challenge in law the position which the *triumviri* had taken by force. But legalistics prevailed, and all unnecessarily the Triumvirate was renewed, at Tarentum in 37 B.C., as of the first of January of that year.⁵⁹ After this date each *triumvir* was theoretically *triumvir iter r.p.c.*, a nicety observed by Octavian in his titulary on the coins.⁶⁰ The omission of the iteration dates the moneyers' gold back to 38 B.C. at the latest, the date forwarded by Grueber as the year of office of Varus and Clodius.

The gold of our four moneyers was struck somewhere between 43 and 38 B.C., inclusive; reason induces us to inquire why the gold was struck at all. Each of the moneyers struck gold with a type or types of his own choosing. The Varus aureus with head of Apollo⁶¹ on the obverse and standing

⁵⁹ For the date of the second term of office see the discussion in Bahr-feldt, pp. 102-3, 106; and T. Rice Holmes, *Architect of the Roman Empire*, Oxford, 1928; I, pp. 231-245.

⁶⁰ E.g., Bahr-feldt no. 103: IMP.CAESAR.DIVI.F.III.VIR.ITER.R.P.C. The coins of Antony do not bear the iteration.

⁶¹ Not "Venus"—Bahr-feldt, p. 53. Cf. the Apollo head on the gold of Clodius, Bahr-feldt no. 30.

Venus on the reverse is the commonest of all Republican gold, save only that struck for Caesar by Hirtius. This duality, the private types and the portrait coinage of the *triumviri*, makes clear that it was not incumbent on the officials simply to laud their city's leaders. Even when the *triumviri* were to be honored the moneyers' enthusiasm was not boundless.

The fact that these gold series are unique in conception, the fact that Lepidus never again appears on a coin struck at Rome,⁶² the fact that Antony and Octavian never again appear at Rome on the same coin or joined in series,⁶³ the fact that the moneyers manage to produce gold of types having no direct reference to the *triumviri*—all lead one to conclude that some special impetus must have motivated the production of these rich and varied aurei. That impetus is most obviously, of course, the very inauguration of the Triumvirate. The newest office of the state, nearest to king, is celebrated by the king's own metal—the types are not

⁶² Only two other series are known which bear his portrait: the presumably Gallic gold (see above p. 12); and an issue of gold and silver attributed to Africa (Grueber, II, nos. 29–31) or Gaul (Sydenham no. 1323), with the portrait of Lepidus on one face, that of Octavian on the other. The provenance of the coins is uncertain but they must be provincial. (One might add the bronze coin of Ephesus, bearing on the obverse the portraits of all three *triumviri*, on the reverse an image of the Ephesian Diana.)

⁶³ Again, the Gallic gold discussed above bears their portraits. Otherwise the two appear together, after the formation of the Triumvirate, on: 1. aurei struck in Gaul (Grueber, II, no. 59); 2. aurei and denarii struck in the East by Barbatius, Nerva, and Gellius (II, nos. 98–110); 3. aurei and denarii similar to the last but signed by no official (II, nos. 120–7); the tressis in the bronze coinage called of “the fleet praefects,” Bibulus, Atratinus, and Capito, struck in Greece or the East (II, pp. 511 and 515, and no. 154) (*pace* Grant, *From Imperium to Auctoritas*, Cambridge, 1946, pp. 43 ff., who would attribute them to Tarentum). One might include 5. aurei with obverse legend ANTONIVS.IMP, reverse legend CAESAR.IMP, dated to 39 by Grueber (II, no. 90) and Sydenham (no. 1327). The legend opposes so late a date, and Bahrfeldt (p. 47) argues cogently for 43 on the basis of the composition of the Borzano hoard.

found in silver. The triumviral portrait gold of Clodius, Musidius, Varus, and Regulus is to be understood as commemorative of a new beginning for Rome.

Bahrfeldt had assumed as much, although the manner in which he dated the pieces cannot be accepted. "Die Münzen . . . scheiden sich ohne weiteres in zwei durch ihr Gepräge wesentlich von einander abweichenden Gruppen. Die Gepräge der ersten folgen in ihrer Verschiedenartigkeit ganz dem hergebrachten republikanischen Brauche, während auf denen der zweiten Gruppe die Porträts und Namen der drei Machthaber M. Lepidus, M. Antonius und C. Caesar mit ihrem Titel III.VIR.R.P.C erscheinen. Daraus folgt unzweifelhaft, daß der Abschluß der Triumvirats in die Amtstätigkeit des Kollegiums fiel und daß die Münzen der ersten Gruppe vor dem 27/II 711/43 geprägt worden sind, die der zweiten aber danach. . . . Die Gepräge der zweiten Gruppe sind sehr zahlreich. . . . Ich glaube daher annehmen zu können, daß alle diese Münzen sich nicht auf den kurzen Zeitraum vom 27/II 711/43 bis zum Ende des Jahres zusammendrängen lassen, sondern daß ihre Prägung auch noch in das Jahr 712/42 hinübergreift, die Amtstätigkeit dieses Kollegiums also von mehr als einjähriger Dauer gewesen sein wird. . . ." ⁶⁴

Bahrfeldt assumes a difficulty where none exists. For he believes that the private types must have been struck before the triumviral portraits. The assumption implies that had the Triumvirate been created on the first of January, instead of the twenty-seventh of November of 43, that the moneyers of that year would have expended all their energy in producing public types while abjuring the private. But the suggestion is gratuitous; P. Accoleius, Petillius Capitolinus, and Marcellinus⁶⁵ all struck after the formation of the

⁶⁴ P. 50.

⁶⁵ But see Alföldi reviewing Pink, p. 388, who would attribute the denarius of Marcellinus to Sicily rather than Rome.

Triumvirate with no public types at all.⁶⁶ Bahrfeldt would also have to explain why, if the moneyers were so zealous in portraying the *triumviri* on their gold, they were so haphazard in their silver.⁶⁷

Second, Bahrfeldt skirts danger by suggesting hopefully that the college of 43 might have continued in office in 42.⁶⁸ For less than thirty-five days remained in the year after the promulgation of the Lex Titia. A great series of dies had to be cut—we know eighteen obverse and twenty-two reverse to have been used—and presumably golden flans had to be manufactured. Yet again the difficulty is removed by denying it. We know of no reason why the office might have been prorogued, and if Varus and Mussidius struck only in 42

⁶⁶ Accoleius: Grueber, I, nos. 4211–4; Capitolinus: I, 4217–25; Marcellinus: I, 4206–8.

⁶⁷ See above, p. 6. An explanation has been attempted by Gabrici, "La Monetazione di Augusto," in *Augustus, Studi in Occasione del Bimillenario Augusto*, Rome, 1938, p. 392 n. 1. He is forced to date the office of Mussidius, Clodius, and Regulus originally in 44, continuing through 43, and protruding into 42 B.C. The fourth moneyer is at first Sepullius Macer, his place being filled in about February of 43 by Varus. Only thus can he justify the striking of denarii picturing Caesar, gold and silver of Republican types, silver without the portrait of Lepidus, and finally the gold under discussion here. The dangers involved in accepting this scheme are enormous; it suffices to remark that the coins of eight moneyers now attributed to 43 B.C. by Alföldi (v. n. 74 *infra*) will be dated later (they cannot be dated earlier) only with great difficulty. Nor can we yet understand why denarii of Antony and Octavian, but not of Lepidus, were struck *after* the formation of the triumvirate. Both Bahrfeldt and Gabrici are confuted by the obvious solution: that each moneyer struck the types which pleased him and which made the proper concessions to political reality.

⁶⁸ A suggestion which one meets strangely often: e.g., Mattingly in Sydenham, p. 223, the latest example. We know that consular elections were held in 43 B.C., albeit late in the year and under some duress from Octavian (Dio xlv.45.3). And Dio xlvii.18.3 certainly implies that not only the new consuls, but a whole new board of magistrates took office on the first of January, 42.

they would have had a full year for the production of all the coins which they wished to strike.⁶⁹

Nor is it then difficult to fill the college of 43. The key is the discovery that the denarius of L. Servius Rufus bears not the portrait of the tribune, Servius Sulpicius Rufus,⁷⁰ but that of Marcus Junius Brutus the tyrannicide.⁷¹ Obviously political support of this nature would have been meaningful in the course of only two years, 44 and 43 B.C. The college of 44 has already been established: M. Mettius, L. Aemilius Buca, P. Sepullius Macer, and C. Cossutius Maridianus.⁷² The portrait of Brutus and the coinage of Servius Rufus in general, therefore, can be dated only to 43. His colleagues are assigned on the basis of style. Sydenham dated M. Arrius Secundus and C. Numonius Vaala to that year,⁷³ and undoubtedly C. Clodius is to be included as the fourth moneyer.⁷⁴ The coins celebrating the formation of the second Triumvirate were struck after the beginning of the following year, when there was sufficient time for the preparation of dies and flans. There is then no point to, and indeed no possibility of, predating Clodius to Varus and Mussidius,

⁶⁹ Cf. Pink, pp. 61-2.

⁷⁰ So Grueber, I, no. 4205 and pp. 566-567.

⁷¹ Sydenham no. 1082; Alföldi, "Porträtkunst," pp. 160-3. Cf. the portrait of Brutus on the aureus struck in the East, Bahrfeldt no. 65.

⁷² For the latest examinations of the college of 44, see Alföldi, *Studien*; C. M. Kraay, "Caesar's *Quattuorviri* of 44 B.C.: the Arrangement of their Issues," in *Numismatic Chronicle* series 6 XIV (1954) 18-31; and Ulrich-Bansa, op. cit., pp. 52-60.

⁷³ Nos. 1083-7.

⁷⁴ So too Mattingly in Sydenham, p. 223. Both the composition of the college and its date had been conceived by Mommsen, *Geschichte*, p. 652; Grueber had assigned one of the four to each of the years 43-40 B.C. Alföldi now suggests that two colleges struck in 43, the second taking office in August and being composed of L. Flaminius Chilo, Ti. Sempronius Gracchus, Q. Voconius Vitulus, and Petillius Capitolinus (?) ("Porträtkunst," pp. 152-6).

and the three can be taken as members of one and the same college, striking in 42 B.C.⁷⁵

Regulus, finally, can be dated no earlier than 42, while there is every reason, as stated above, not to separate him from the other three to be assigned to a later year. The problem rather is, when in 42 did he strike with relation to his colleagues. The lack of any die connection with the coins of Clodius, Mussidius, and Varus would indicate that those three all struck before or after Regulus. His best dies, as we have seen, were cut by the engraver who produced die O.I, the earliest portrait of Octavian of the stemma above. But there are indications that the same engraver cut additional dies for the moneyers. The portraits of Antony and Octavian on the denarii of Varus are very close to those under discussion.⁷⁶ The head is larger, although the relief is no larger, nor is the detail as fine; but the dies were being cut for a series of silver, not for commemorative gold, and presumably a number were produced more quickly. The entire concept of the portraits is the same, the hair of the heads of Octavian

⁷⁵ This dating will render void the opinion which sees in the "Pantheus" of the Clodius/Antony aureus a reference to the victories in the East of 39 and 38. Certainly the other reverses of this series, the Felicitas of the coin of Lepidus, the Venus and Cupid of Octavian, have no especial significance in the context of the victories of either *triumvir*. Alföldi's interpretation of the Antony reverse as Aion makes the earlier explanation unnecessary. Similarly, Pais' ingenious but unsound explication of the types of Mussidius depends from accepting a date no earlier than 41 for that moneyer, and thus is to be rejected ("I Nummi di L. Mussidius Longus ed il loro Significato per la Storia del Triumvirato romano," in *Rendiconti della R. Accademia Nazionale dei Lincei* series 5 XXXIII [1924] 15-24). Finally, the hoard evidence must in some cases be reconsidered: e.g., the Pieve-Quinta hoard, which is dated by Bahrfeldt to 42 ("Der Denarschatz," p. 18), by Grueber to 38-7 (I, p. 560), and by Sydenham to 39 (p. lvii). The date depends precisely from the determination of the year in which Varus struck.

⁷⁶ PLATE 9, nos. A and B respectively, to be compared with portraits A.IV, O.I, and O.IV.

at any rate is cut always in the same manner on both gold and silver, Antony's wrinkled brow and the eyes and ears of both are identical.

Thus, that the engraver of Regulus' fine dies cut obverse O.I as well cannot date the issue of Regulus' gold. There is, however, a second indication of the possibility that Regulus' coins were the earliest of these series. It has been suggested that the moneyers of any given college were not equal in rank, but that one held the primacy.⁷⁷ Thus the denarius of L. Flaminius Chilo with obverse legend III.VIR.PRI.FL,⁷⁸ that is, *quattuorvir primus flavit*.⁷⁹ Grueber understood by *primus* that Chilo "acted as the superintendent-in-chief of the issue for the year."⁸⁰ But the word is to be taken as well in a temporal sense: Chilo, the superintendent to be sure, was the first of his college to strike coin.⁸¹ Now of the moneyers of 42 Regulus alone lays claim to any office beyond that of *triumvir a.p.f.*⁸² He struck in great number a series of denarii, bearing on the obverse the head of his father,

⁷⁷ Pink, pp. 39-40, 61.

⁷⁸ Grueber, I, nos. 4198-200.

⁷⁹ Mommsen, *Geschichte*, p. 652.

⁸⁰ I, p. 565.

⁸¹ PRI.FL, then, is only a different way of expressing what III.VIR had meant on the coins earlier. All the moneyers were *triumviri*, or later *quattuorviri*, but only the head of the college had used the title on his coins. (Cf. Alföldi, "Studien zur Zeitfolge der Münzprägung der römischen Republik," in *Schweizerische Numismatische Rundschau* XXXVI [1954] 28-30, and *Studien*, p. 5 n. 1.) Similarly, L. Aemilius Buca is the one moneyer of 44 B.C. to entitle himself IIII.VIR (Grueber, I, no. 4162); both the style and type (the dream of Sulla) of his earliest denarii prove them to have been the earliest of the year. When the portrait of Caesar was taken up, a reorganization of the mint apparently took place, for in these series Mettius struck first and alone. (Cf. Alföldi, *Studien*, pp. 5-6, 84-6).

⁸² Pink, p. 39: "Our previous research has shown that it is only the leading moneyer who bears the title of office." But in our college all but Varus strike gold with the inscription IIII.VIR.A.P.F, so that Regulus' priority would have to be indicated otherwise. The link between the old and the

L. Livineius Regulus, praetor in an unknown year,⁸³ and reading L.REGVLVS.PR, REGVLVS.PR, or anepigraphic. One of the reverse types paired with these obverses pictures a curule chair with a fascis at either side and bears the legend REGVLVS.F / PRAEF.VR.⁸⁴ The relation of a praefect of the city to the coinage is not clear; we know there to have been men of that office earlier in charge of the production of gold.⁸⁵

The enlargement of the college of moneyers from three to four under Caesar was one part of a considerable reorganization of the state.⁸⁶ One may well wonder why the efficient conduct of an office is projected in increasing, rather than decreasing, the number of responsible officials. The answer probably is to be, in this case at any rate, that the fourth man was Caesar's man, a compliment to the *peculiares servi*. Again the interest in the *aerarium* noted previously, and the use of the praefect in the financial service of both Caesar and Augustus, bear the point out. There was to be a sure understanding and a tight control of those offices which created,

new forms of identifying the *primus* of the mint will be found in the second college of 43 B.C. Chilo's IIII.VIR.PRI.FL is balanced by Ti. Sempronius Gracchus' IIII.VIR on his aurei and denarii (Grueber, I, nos. 4313-5; Bahrfeldt no. 102).

⁸³ Broughton, II, p. 464.

⁸⁴ Grueber, I, nos. 4261-2.

⁸⁵ A considerable number of aurei are known which were struck by L.PLANC.PR (or PRAEF).VRB during the third dictatorship of Caesar, 46-45 B.C. (Bahrfeldt nos. 20-2). Whether or not the coins were produced at the mint of Rome, or at some provisional establishment, the elected moneyers had nothing to do with overseeing them. Apparently the *praefectus urbi* who coined served as the precedent for the creating of the office of *praefectus aerarii Saturni* by Augustus in 28 as a substitute for the quaestors who had filled that post (Dio LIII.2.1; Tacitus, Annals, XIII. 28-9).

⁸⁶ Suetonius *Julius* 41.1, 76.3. Cf. T. Rice Holmes, *The Roman Republic*, Oxford, 1923; III, pp. 318-25; and W. E. Heitland, *The Roman Republic*, Cambridge, 1923; III, pp. 340-7, 356-62.

as it were, one of the means of power. When Caesar was dead, the fourth moneyer continued to strike into the first years of the Triumvirate; but when Augustus' control was unchallenged and no especial overseer necessary, the moneyers reappeared, in 20–19 B.C., as a board of three.⁸⁷ The indication by Regulus, then, that he was PRAEF.VR may not be as innocent as Grueber's interpretation of it: that he was *praefectus urbi feriarum Latinarum causa*, a relatively minor office.⁸⁸ Regulus, I suggest, was praefect of the city whose duties included the control of the coinage. Not until a consul was absent from the city did a praefect come into his full administrative powers; Lepidus, if not Plancus, seems to have remained in the city for the course of the year 42 B.C.⁸⁹ Until such an occasion arose, Regulus had another matter to attend: he became one of the moneyers.

The legend PRAEF.VR occurs on only one part of Regulus' silver coinage. This, however, does not contradict the

⁸⁷ Franco Panvini-Rosati, "Le Emissioni in Oro e Argento dei *Tresviri monetales* di Augusto," in *Archeologia Classica* III (1951) 81; Pink, pp. 44–48.

⁸⁸ I, pp. 579–80. The one reverse type which might refer to the games pictures two men fighting three wild beasts (Grueber, I, nos. 4271–3), but never bears the legend which would indicate that Regulus was *praefectus urbi* in charge of the festivities. The coin reads simply, L.REGVLVS. Alföldi is surely right in regarding Regulus as praefect for the grain supply ("Studien," pp. 23–4); cf. the denarius with modius and ears of grain as reverse type (Grueber, I, nos. 4269–70). Here too the legend is simply L.LIVINEIVS / REGVLVS, so that the denarius with curule chair and two fasces, and the legend REGVLVS.F / PRAEF.VR, must have been meant to be commemorative.

⁸⁹ CIL X 6087 states that Plancus was involved in a distribution of land around Beneventum. Broughton assumed the deed to date to 42: "[Plancus] began to distribute land to soldiers at Beneventum [in 42 B.C.]" (p. 357). But the inscription is Augustan and the distribution is not dated; it could as well have been 41. Pink suggests (pp. 40–1) that Lepidus was appointed *praefectus urbi* not as secondary to Plancus or Lepidus, but against Octavian's departure from Rome. But Octavian *was* out of Rome in 42, and it is curious that the praefect is nowhere referred to in any manner whatever, outside the mint.

argument, but rather strengthens it: as far as the striking of coin was concerned, Regulus was a moneyer. Even on the PRAEF.VR silver we do not meet, as we might have expected, an indication of a special issue.⁹⁰ He probably issued first the PRAEF.VR denarii, signifying his position, and then the gold and silver which appear to be the output of an ordinary moneyer. It has been commonly assumed that the PRAEF.VR silver must be later than the rest, on the grounds that once the title had been assumed it would never have been put by.⁹¹ Thus arose Grueber's interpretation of the title as a temporary honor which supervened in the course of the year. Yet the PRAEF.VR coin is, aside from the legend, an ordinary issue, celebrating nothing save the fact that Regulus was PRAEF.VR. But if we conceive that Regulus was not a moneyer who happened to become praefect, but the reverse—a praefect assigned to the mint—the problem is settled at once. The PRAEF.VR denarii were in a sense commemorative, an announcement of the position held by Regulus. Once the point was made he continued to strike simply as one of four moneyers. Compare the case of Flaminius Chilo who proclaimed that he *primus flavit*. Yet only one of his two series bears that inscription; had we only his portrait coins of Caesar we would never have known of the distinction.

The relative position of Regulus and Mussidius has already been considered by Alföldi in an examination of the style of the portrait of Caesar.⁹² Here too Mussidius is seen

⁹⁰ E.g., the AD.FR.V.EMV.EX.S.C of the denarius of L. Calpurnius Piso and Q. Servilius Caepio (Grueber, I, nos. 1125–8). But Pink labels the Regulus piece “special,” without indicating his reason (p. 43).

⁹¹ E.g., Babelon, II, p. 142. It cannot be proved that the type is either earlier or later than the other denarii of Regulus. For that reverse is paired with an obverse whose legend, L.REGVLVS / PR, is not found elsewhere.

⁹² “Porträtkunst,” p. 155 and pl. IV.

to be the later, for the portrait is both smaller and cruder than that of the coins of Regulus. But the Caesar portrait of Regulus is in turn smaller than that of Flaminius Chilo, who struck during the last half of 43 B.C. Thus Regulus serves as a link between the college of 43 B.C. and his colleagues of 42.

Accepting Regulus as the fourth moneyer, one returns to Pink to consider why he divides the coinage of 42 B.C. into "regular" and "special" issues.⁹³ The denarius of Regulus with PRAEF.VR suffers the fate of being classified "special," without any reason having been admitted to justify the distinction. But more disturbing, three of our five series of gold are also "special": those of Regulus and Clodius, and the one Mussidius series with Mars reverse. Now the speciality of these issues is supposed to consist in the origin of the metal. The bullion was normally *aurum privatum*, purchased on the open market. *Aurum publicum* (i.e., from the *aerarium Saturni*) was to be struck only in an emergency, when the metal was not otherwise available.⁹⁴ But the suggestion that the moneyer himself supplied the metal used in the mint (*aurum privatum*) is backed by no evidence, although it has been asserted before Pink.⁹⁵ Similarly, the contrast between "public" and "private" bullion is not supported by any Roman source. Actually the only basis for the division between these five gold series is the title in the reverse legend, IIII.VIR.A.P.F. And the title remains just a title: these men are *quattuorviri* (what else could they be as moneyers?) who strike public gold (what other gold could they strike?).⁹⁶

⁹³ P. 43.

⁹⁴ P. 56-8. See too Pink's "Special Coinages under the *Triumviri Monetales*," in *Essays in Roman Coinage Presented to Harold Mattingly*, Oxford, 1956, pp. 59-62.

⁹⁵ E.g. H. Mattingly, *Roman Coins*, London, 1928, pp. 28-9.

⁹⁶ Although the title appears only on the gold, it may refer to the entire coinage, to be translated "... for the striking of public money"—*argento p.f.*

Alfoldi is undoubtedly correct in rejecting the whole concept.⁹⁷ Every issue was special, insofar as it depended from a *senatus consultum* or a vote of the people. All the moneyers bore the title whether or not they engraved it on their coins. It was, after all, just that much more to be cut on die after die. If Mussidius can honor the *triumviri* with a complete series which bears the title, and contrive to produce a second series which always omits it; if Varus can refuse to use it while Clodius and Regulus include it; and if the series bearing the title *precede* those omitting it: then we must reexamine the criteria for the division between "special" and "ordinary" issues.

To conclude, the college of 42 B.C. can now be more clearly conceived. Clodius, Varus, and Mussidius are proved to have been colleagues. Regulus was undoubtedly the fourth, as one would conclude from the type of the gold, the style of the portrait engraving, and the brief historical considerations above presented. The order of the production of the gold series is again clear in the case of the three moneyers, while the investigation of Regulus' status in the college makes it probable that he was *primus*. We cannot construct the order of production of all the series of gold and silver of 42 B.C.; that will never be possible. But the gold struck in honor of the second Triumvirate is now arranged: Regulus, Clodius, Mussidius/Mars, Varus, Mussidius/cornucopia.

⁹⁷ Review of Pink, pp. 389-91.

DESCRIPTION OF OBVERSE DIES AND NOTES ON THEIR DETERIORATION

L.I Large bust l. Point of nose between PI. R above back of head.

<i>No.</i>	<i>Reverse die</i>	<i>Breaks</i>
44.1	C.A1	1. Break from lower lip to base of E.

L.II Large bust l. Point of nose at I.

<i>No.</i>	<i>Reverse die</i>	<i>Breaks</i>
44.2	C.A1	1. Two breaks <i>inter alia minora</i> : from upper bar of E outward through dotted border; from dotted border to tip of r. staff of V to upper curve of S.

L.III Large bust l. Point of nose between PI. R at back of head. Verticals of I of LEPIDVS and P of R.P.C are not parallel.

<i>No.</i>	<i>Reverse die</i>	<i>Breaks</i>
50.1	M.Am	1. Break from tip of r. leg of M toward intersection of chin and throat. 2. Break from lower forehead upward toward point of V.
50.3	M.Cm	1. as above but more pronounced. 2. as above but more pronounced.
50.2	M.Bm	1. as above. 2. as above.

<i>No.</i>	<i>Reverse die</i>	<i>Breaks</i>
		3. Break through dotted border between EP inward to middle arm of E.
		4. Break from point of curve of D to point of V.
		5. Break from tip of vertical of R of R.P.C inward diagonally to back of head.

50.4	M.Bm	1. as above.
		2. as above.
		3. as above but now beyond middle bar of E.
		4. as above.
		5. as above.
		6. Break from center of r. staff of V horizontally through center of S.

L.IV Large bust l. Point of nose between PI. R at back of head. Verticals of I of LEPIDVS and P of R.P.C parallel.

<i>No.</i>	<i>Reverse die</i>	<i>Breaks</i>
38.1	V.A	1. Tongue-like break below the bust, rising to the r., is regular for all examples.
		2. Bulge in center of l. leg of M.
41.7	M.Bc	1. as above.
		2. as above.
		3. Two breaks: from point of I of LEPIDVS, under D, to lower forehead; from lower curve of D toward but not touching upper forehead.

<i>No.</i>	<i>Reverse die</i>	<i>Breaks</i>
4I.1	M.Bc	1. as above. 2. Bulge is now a thick break to the dotted edge. 3. as above.
4I.2	M.Bc	1. as above. 2. [Off flan] 3. as above.
L.V.	Small bust l. Point of nose between EP.	
<i>No.</i>	<i>Reverse die</i>	<i>Breaks</i>
4I.5	M.Cc	1. A number of hairline breaks are common to all examples: staff of L to base of E; curve of P to top and to center of I; lower curve of D through center of l. staff of V, to tip of r. staff of V; from lower back of head diagonally l. behind neck.
4I.3	M.Cc	1. as above. 2. Break from top l. leg of M to dotted border.
4I.6	M.Cc	1. as above. 2. as above but now including break from center point of M inward. 3. Break from hair in front to lower curve of D. 4. Break from tip of nose to tip of lowest bar of E.
4I.4	M.Ec	1. as above. 2. as above. 3. as above. 4. as above. 5. Break from lips toward base of L.

L.VI Small bust r. Point of chin between PC.

<i>No.</i>	<i>Reverse die</i>	<i>Breaks</i>
47.9	R.A1	None
47.1	R.A1	1. Break from base of I of LE- PIDVS to back of head.
47.2		
47.3		
47.5		
47.6		
47.7		
47.II		
47.I2		
47.4	R.A1	1. as above but now a large tri- angular fault.
47.I0	R.A1	1. Break is gone, for the die has been reworked: e.g., where earlier the head had risen sharply from the field, now the outline merges with the plane. So too the bridge of the nose has disappeared, which cannot be attributed to wear. 2. Break inward from dot after VIR.

L.VII Small bust r. Point of chin at P. [Known only from this bronze.]

<i>No.</i>	<i>Reverse die</i>	<i>Breaks</i>
47bis	R.A1	

A.I⁹⁸ Large bust r. M.AN straight.

<i>No.</i>	<i>Reverse die</i>	<i>Breaks</i>
45.7	C.Aa	1. Area from center point of I of

⁹⁸ No. 45.9 has been omitted. For these purposes it is illegible.

No.	Reverse die	Breaks
		ANTONIVS to the letter at either side and above to the dotted edge entirely corrupt.
45.1	C.Ba	1. as above but now including the upper area of N.
45.2		
45.3		2. Break from midpoint of curve of C, past the curve of P, to dotted edge.
45.4		
45.5		
45.8		
51.3	M.Am	1. has now been repaired. Some traces remain, but the most important break is now 3. 2. is also repaired and the edge recut. 3. Considerable corruption between TO and ON, not extending 1. beyond the vertical of T.
51.1	M.Am	3. as above but extending 1. beyond the vertical of T.
51.7	M.Bm	3. as above. 4. Break from top of A to dotted edge.
51.4	M.Bm	3. as above.
51.9	M.Cm	4. as above. 5. Break from lower tip of C to bust.
51.5	M.Bm	3. as above.
51.6		4. as above. 5. as above. 6. Break toward M from intersection of back of hair and neck.

A.II Large bust r. First N of ANTONIVS wider above than below: the verticals are not parallel.

<i>No.</i>	<i>Reverse die</i>	<i>Breaks</i>
51.10	M.Bm	1. Corruption at r. base of first N of ANTONIVS regular for all examples.
51.11		
39.2	V.B	1. as above.
39.3		2. Corruption begins on upper l. side of P, hairline break toward dotted edge.
39.1	V.B	1. as above. 2. as above. 3. Dot on top of curve of R of R.P.C and break beginning toward edge.
42.4	M.Ac	1. as above.
42.7		2. as above but break now extends through dotted edge, and involves the dot between R.P.
42.9		3. as above.

A.III⁹⁹ Large bust r. M.AN curved.

<i>No.</i>	<i>Reverse die</i>	<i>Breaks</i>
42.3	M.Bc	None
42.10		
42.5	M.Dc	1. Two hairline breaks: horizontally between AN, diagonally between NT.
42.1	M.Ec	1. as above.
42.11	M.Dc	2. Hairline break from top of R of R.P.C to dotted edge.

⁹⁹ No. 42.12 has been omitted as illegible for these purposes.

<i>No.</i>	<i>Reverse die</i>	<i>Breaks</i>
42.2	M.Bc	1. as above.
42.6		2. as above.
		3. Corruption at upper l. of O almost touching r. tip of bar of T.

A.IV Fine bust r.

<i>No.</i>	<i>Reverse die</i>	<i>Breaks</i>
48.7	R.Ba	1. Dot at back of head between
48.14	R.Aa	TO.
48.3	R.Ba	1. as above.
		2. Small cut under nose.
48.1	R.Ba	1. as above.
48.2		2. as above but larger.
48.4		
48.6		
48.9	R.Ca	1. as above.
		2. as above but cut connected by break to tip of nose.

A.V Small bust r. Point of nose between R of VIR and R of R.P.C.

<i>No.</i>	<i>Reverse die</i>	<i>Breaks</i>
48.12	R.Ca	1. Break from back of head, above lower limit of hair.

A.VI Gross bust r.

<i>No.</i>	<i>Reverse die</i>	<i>Breaks</i>
48.8	R.Ca	1. Two breaks: diagonally upward from lower tip of I of ANTONIVS through V to top of S and beyond toward dotted edge; from l. end of bar of T upward to dotted edge.
48.11	R.Ca	1. as above.

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<i>No.</i>	<i>Reverse die</i>	<i>Breaks</i>
48.13		2. Break to M from intersection of back of neck and hair.
---48.5 ¹⁰⁰	R.Ca	1. as above. 2. [This area obscured by the Este counterstamp.]
A.VII Small bust r. Point of nose at R of VIR.		
<i>No.</i>	<i>Reverse die</i>	<i>Breaks</i>
48.10	R.Da	1. Break from dotted edge to l. side of A.
O.I Large bust r. CAES curved.		
<i>No.</i>	<i>Reverse die</i>	<i>Breaks</i>
46.1	C.Ao	1. Break from dotted edge outward above first C.
46.2	C.Bo	
43.3	M.Cc	1. as above but now extending into letter C.
43.8		2. Break from dotted edge outward above staff of E. 3. Two breaks from back of hair, from hair line and just above hair line.
43.2	M.Cc	1. as above. 2. as above. 3. as above. 4. Break from back of head to r. leg of first A.
O.II ¹⁰¹ Large bust r. CAES straight.		
<i>No.</i>	<i>Reverse die</i>	<i>Breaks</i>
52.1	M.Am	None
52.3		

¹⁰⁰ The dash indicates that the coin cannot be placed exactly in the sequence.

¹⁰¹ It has not been possible to determine from the reproductions the condition of the die on nos. 52.2, .4, .12, and .13.

<i>No.</i>	<i>Reverse die</i>	<i>Breaks</i>
52.II		
40.1	V.A	1. Short break toward edge from each of the two dots separating R.P.C.
40.2		
40.3		
40.4		
43.1	M.Ac	
43.5	M.Bc	
43.6	M.Ac	
43.7	M.Bc	
43.9		
43.10	M.Ac	
52.5	M.Bm	
52.6		
52.7		
52.10		
O.III	Fine bust r. Large letters. Point of nose at E, of chin at A.	
<i>No.</i>	<i>Reverse die</i>	<i>Breaks</i>
49.2	R.Bo	1. Considerable corruption over VIR. Top of break from I to R slopes down to r.
49.4	R.Bo	1. as above. 2. Break from bottom r. tip of bust to dotted edge.
49.1	R.Bo	1. as above but top of break from I to R now almost horizontal. 2. as above.
O.IV	Fine bust r. Small letters. Point of nose between ES, of chin at R.	
<i>No.</i>	<i>Reverse die</i>	<i>Breaks</i>
49.3	R.Ao	1. Break from upper tip of C of R.P.C toward top of head.
49.5		
49.6		
49.7		
49.8		

DESCRIPTION OF REVERSE DIES AND NOTES ON THEIR DETERIORATION

V.A Upper thumb under I.

<i>No.</i>	<i>Obverse die</i>	<i>Breaks</i>
38.1	L.IV	1. Two breaks: outward and upward diagonally from dotted edge to l. of first V of VAA-RVS; bulge inward from dot next above.
40.1	O.II	
40.2		
---40.3	O.II	1. [Off flan]
40.4		

V.B Upper thumb under B.

<i>No.</i>	<i>Obverse die</i>	<i>Breaks</i>
39.1	A.II	None
39.2		
39.3		

M.Ac Graceful cornucopia, tip l. IVS far from type.

<i>No.</i>	<i>Obverse die</i>	<i>Breaks</i>
43.1	O.II	1. All examples share: break from lower end of staff of first L; break connecting tops of second S and I; break connecting upper tip of S of LONGVS with stem of grape-cluster.
43.6		
43.10		
42.4	A.II	1. as above.
42.7		2. Two breaks; between 1. fillet

<i>No.</i>	<i>Obverse die</i>	<i>Breaks</i>
42.9		and cornucopia one mm. below their juncture; from dotted edge inward between second VS of MVSSIDIVS.

M.Bc¹⁰² Graceful cornucopia, tip l. IVS almost touches type.

<i>No.</i>	<i>Obverse die</i>	<i>Breaks</i>
42.10	A.III	None
42.2	A.III	1. Tiny horizontal break connects midpoint of r. leg of V and l. curve of S of LONGVS.
43.7	O.II	1. as above but break passes through S. 2. Hairline break connects upper and lower portions of l. fillet, in field between fillet and cornucopia.
43.9	O.II	1. as above but break passes into lower center of V. 2. as above. 3. Break begins inward from dotted edge toward S of LONGVS, one mm. above and paralleling break 1.
43.5	O.II	1. as above. 2. as above. 3. as above. 4. Break connects lower r. leg of V and lower r. curve of S, below and parallel to 1.

¹⁰² The reproductions of nos. 41.2 and .12 to which I have referred are not sufficiently clear to justify their inclusion in this table.

<i>No.</i>	<i>Obverse die</i>	<i>Breaks</i>
41.1	L.IV	1. as above but break reaches edge.
41.7		
42.3	A.III	2. as above.
42.6		3. as above but break reaches tip of S.
		4. as above.

M.Cc Gross cornucopia, tip r. Edge of cornucopia falls below IVS of MVSSIDIVS and S of LONGVS.

<i>No.</i>	<i>Obverse die</i>	<i>Breaks</i>
41.3	L.V	1. Two breaks: from base of second I to edge of cornucopia;
41.5		from round fruit at r. top of
43.3	O.I	cornucopia diagonally r. to
43.8		dotted edge.
41.6	L.V	1. as above.
		2. Break connects ends of three leaves protruding from end of cornucopia.
43.2	O.I	1. as above.
		2. as above.
		3. Break connects upper tip of S of LONGVS to round fruit at r. top of cornucopia.

M.Dc Gross cornucopia, tip r. Edge of cornucopia falls below S of MVSSIDIVS and above S of LONGVS.

<i>No.</i>	<i>Obverse die</i>	<i>Breaks</i>
42.5	A.III	None
42.II		

M.Ec Gross cornucopia, tip r. Edge of cornucopia falls below IVS of MVSSIDIVS and above S of LONGVS.

<i>No.</i>	<i>Obverse die</i>	<i>Breaks</i>
41.4	L.V	None
42.1	A.III	

C.A1 [Unique.]

<i>No.</i>	<i>Obverse die</i>	<i>Breaks</i>
44.1	L.I	1. Break from r. side of cornucopia under hand toward fourth I of IIII.
44.2	L.II	1. as above. 2. Break inward from dot between S.M.

C.Aa Caduceus points to P. Bow protrudes between IIII and VIR.

<i>No.</i>	<i>Obverse die</i>	<i>Breaks</i>
45.7	A.I	1. Two breaks: from face of shield through upper part of P, past lower curve of C, to dotted edge; from lower tip of r. leg of M to dotted edge.
45.9		

C.Ba Caduceus points between R.A.

<i>No.</i>	<i>Obverse die</i>	<i>Breaks</i>
45.1	A.I	1. A number of breaks are common to all examples: from lower curve of S to dotted edge; from lower tip of first F to dotted edge; from each leg of R to dotted edge; between arms of final F.
45.2		
45.3		
45.4		
45.5		
45.8		

C.Ao Large group.

<i>No.</i>	<i>Obverse die</i>	<i>Breaks</i>
46.1	O.I	None

C.Bo Small group.

<i>No.</i>	<i>Obverse die</i>	<i>Breaks</i>
46.2	O.I	1. Break from top of O diagonally to dotted edge.

R.A1¹⁰³ [Unique.]

<i>No.</i>	<i>Obverse die</i>	<i>Breaks</i>
47.9 47.11	L.VI	1. Three breaks: lower end of staff continues to dotted edge; downward from end of drapery on r.; two bulges beyond the dots above L.R.
47.5 47.6 47.7 47.12	L.VI	1. as above. 2. Break from upper tip of r. leg of second V toward dotted edge.
47.1 47.2 47.3 47.4	L.VI	1. as above. 2. as above. 3. Break diagonally from body at waist to fold of drapery at r.
47.10	L.VI	1. as above. 2. as above. 3. as above. 4. Break from corner of first L to staff.

¹⁰³ No. 47*bis* has been omitted from consideration. See the note at that number in the Catalogue.

R.Aa Legend begins r. above. Elbow opposite A. IIII.
VIR.A.P.F. straight.

<i>No.</i>	<i>Obverse die</i>	<i>Breaks</i>
48.14	A.IV	1. Breaks through ankle of l. leg, and from bottom of rock to dotted edge.

R.Ba¹⁰⁴ Legend begins l. under.

<i>No.</i>	<i>Obverse die</i>	<i>Breaks</i>
48.3	A.IV	1. Two breaks: from midpoint of staff of L upward toward dotted edge; from dotted edge above R of REGVLVS out- ward.
48.4		
48.6		
48.7		
---48.1	A.IV	1. [Off flan]

R.Ca Legend begins r. above. Elbow opposite F.

<i>No.</i>	<i>Obverse die</i>	<i>Breaks</i>
48.5	A.VI	1. Break from r. armpit to inter- section of staff and drapery.
48.9	A.IV	
48.12	A.V	2. Break from midpoint of staff of F diagonally upward toward curve of P.
48.8	A.VI	1. as above.
48.11		2. as above but touches curve of P.
48.13		

R.Da Legend begins r. above. Elbow opposite A. IIII.
VIR.A.P.F. curved.

<i>No.</i>	<i>Obverse die</i>	<i>Breaks</i>
48.10 ¹⁰⁵	A.VII	

¹⁰⁴ No. 48.2 has been omitted, for its reproduction is illegible to me.

¹⁰⁵ The catalogue reproductions of this piece are not clear enough to permit an estimate of the damage done the die in striking.

R.Ao Legend begins r. above.

<i>No.</i>	<i>Obverse die</i>	<i>Breaks</i>
49.7	O.IV	None
49.3 49.5	O.IV	1. Two breaks: from face of Anchises toward middle bar of F; from middle bar of F through upper bar to dotted edge.
49.6	O.IV	1. as above but two breaks have joined. 2. Break from midpoint of base of first L diagonally inward toward knee of Anchises.
49.8	O.IV	1. as above. 2. as above. 3. Break from lower point of G diagonally inward toward knee of Anchises.

R.Bo Legend begins l. above.

<i>No.</i>	<i>Obverse die</i>	<i>Breaks</i>
49.2	O.III	1. Massive fault from ground line obscures lower l. leg of Aeneas and rises to waist. 2. Break from dotted edge inward at second I of IIII.
49.4	O.III	1. as above. 2. as above but extends toward fourth I.
49.1	O.III	1. as above. 2. as above but touches fourth I. 3. Break from upper tip of A through dot to midpoint of P.

M.Am¹⁰⁶ Legend begins l. under.

<i>No.</i>	<i>Obverse die</i>	<i>Breaks</i>
52.1	O.II	1. Four breaks: from top of staff of first F through dotted edge; from lower tip of l. leg of MV ligature to l. end of ground line; from upper r. tip of MV ligature to upper curve of S; from upper l. tip of N to dotted edge.
51.3	A.I	1. as above.
52.3	O.II	2. Break from top of staff of P to dotted edge.
52.II		
---52.2	O.II	1. as above. 2. [Off flan]
51.1	A.I	1. as above. 2. as above. 3. Break from dotted edge to upper l. tip of second V of MVSSIDIVS.
50.1	L.III	1. as above. 2. as above. 3. as above but break continues to midpoint of I.

M.Bm Legend begins r. above. Spear points to first I of IIII.

<i>No.</i>	<i>Obverse die</i>	<i>Breaks</i>
50.2	L.III	1. Break from upper l. tip of N to dotted edge regular for all
50.4		

¹⁰⁶ The reproduction of 52.13 is not sufficiently good to permit its classification.

<i>No.</i>	<i>Obverse die</i>	<i>Breaks</i>
51.7	A.I	examples, when not off flan. 2. Break from l. end of shield to lower r. leg of Mars, ending in bulge on l. side of leg.
51.4	A.I	1. as above.
51.5		2. as above but break continues
51.6		1. to spear.
51.10	A.II	
51.11		
52.4	O.II	
52.5		
52.7		
52.12		
52.6	O.II	1. as above.
52.10		2. as above.
		3. Break from midpoint of base of second L inward toward l. leg of Mars.

M.Cm Legend begins r. above. Spear points to S of LONGVS.

<i>No.</i>	<i>Obverse die</i>	<i>Breaks</i>
50.3	L.III	1. Three breaks: from tip of V of LONGVS inward to ground line; from top of P to dotted edge; from tip of upper arm of final F to dotted edge.
51.9	A.I	

CATALOGUE¹⁰⁷

<i>No.</i>	<i>Obverse portrait</i>	<i>Obv. die</i>	<i>Rev. die</i>	<i>Collection</i> ¹⁰⁸
<i>C. VIBIVS VARVS</i>				
38.1	Lepidus	L.IV	V.A	Paris
39.1	Antony	A.II	V.B	Paris
.2		A.II	V.B	Berlin
.3		A.II	V.B	London
40.1	Octavian	O.II	V.A	Paris
.2		O.II	V.A	London
.3		O.II	V.A	Vatican
.4		O.II	V.A	Rome, Museo naz.

L. MVSSIDIVS LONGVS / cornucopia

41.1	Lepidus	L.IV	M.Bc	Paris
.2		L.IV	M.Bc	Berlin
.3		L.V	M.Cc	Vienna
.4		L.V	M.Ec	Vatican
.5		L.V	M.Cc	London

¹⁰⁷ As mentioned above, the catalogue numbers are those assigned by Bahrfeldt; the numbers in brackets are additions to his listings. Bahrfeldt appended to each type the history of each example of that type: place of discovery (when known), previous owners, auction sales in which the coin appeared, as well as any physical peculiarities of the piece. Following his example, I have included all additional information available to me, without repeating that already found in Bahrfeldt.

¹⁰⁸ I have not attempted to trace the recent history of each of the coins on the market; since almost all are illustrated somewhere the results would not be commensurate with the labor involved, and one sale of Roman gold could undo them all. When the present owner is not known to me, a reference to a previous collection is given.

<i>No.</i>	<i>Obverse portrait</i>	<i>Obv. die</i>	<i>Rev. die</i>	<i>Collection</i>
.6		L.V	M.Cc	
[.7 ¹⁰⁹		L.IV	M.Bc	New York ¹¹⁰
6. Ex Jameson coll.				
42.I	Antony	A.III	M.Ec	London
.2		A.III	M.Bc	Paris
.3		A.III	M.Bc	
.4		A.II	M.Ac	
.5		A.III	M.Dc	
.6		A.III	M.Bc	Vienna
.7		A.II	M.Ac	
.8				Berlin
.9		A.II	M.Ac	Rome, Museo naz.
.10		A.III	M.Bc	Budapest
[.11		A.III	M.Dc	New York
[.12		A.III	M.Bc	
3. Ex Jameson coll. 4. R. Ratto sale, Lucerne, Jan. 23, 1924, no. 1364.				
5. Formerly in Paris, exchanged as a duplicate. Its present habitat is not known to me. 7. Ars Classica sale XVIII, Lucerne, Oct. 10, 1938, no. 31.				
12. M. Ratto sale, Milan, Jan. 19, 1956, no. 12.				
43.I	Octavian	O.II	M.Ac	
.2		O.I	M.Cc	Vienna
.3		O.I	M.Cc	Paris
.4		O.II	M.Bc	
.5		O.II	M.Bc	Vienna
.6		O.II	M.Ac	Vatican
.7		O.II	M.Bc	

¹⁰⁹ Bahrfeldt did not include this piece in his listing although he knew of it. But he relegated it to "Abbildungen," presumably because he lacked the weight of the coin. Since weight is not considered in this monograph, I have included in the Catalogue all the examples known to me, whether in the original or through casts or photographs.

¹¹⁰ The three coins attributed to New York, nos. 41.7, 42.II, and 52.II, pertain to the Durkee collection in the Metropolitan Museum of Art, but are to be found on deposit in the American Numismatic Society.

No.	Obverse portrait	Obv. die	Rev. die	Collection
.8		O.I	M.Cc	Rome, Museo naz.
.9		O.II	M.Bc	London
[.10		O.II	M.Ac	Rome, Museo naz.

1. Ex Prowe coll. 4. Formerly in Paris, exchanged as a duplicate. I have not seen a reproduction of this piece; the obverse and reverse dies are inferred from Bahrfeldt's notes on "Stempelgleichungen," p. 57. 7. R. Ratto sale, Lucerne, Jan. 23, 1924, no. 1448 = Leo Hamburger Auktions-Katalog No. 96, Frankfurt a. M., Oct. 25, 1932, no. 770. 10. Ex Gneccchi coll.

P. CLODIVS

44.1	Lepidus	L.I	C.A1	Berlin
[.2		L.II	C.A1	

2. Bahrfeldt knew only the Cajazzo specimen, long thought to be unique. This second copy, struck from a different pairing of dies, has now come to light. A cast of it, bearing no mark of identification, is to be seen in the British Museum; in Berlin the collection of the Staatliche Museum possesses a wax impression of the coin with a note reading (apparently) "Nervegna", as Dr. Erxleben writes me, although the coin did not appear in the Martignetti-Nervegna sale (Sambon-Canessa), Rome-Paris, Nov. 18, 1907. I have been able to discover neither its origin nor its present location.

45.1	Antony	A.I	C.Ba	Vatican
.2		A.I	C.Ba	Berlin
.3		A.I	C.Ba	Vienna
.4		A.I	C.Ba	Paris
.5		A.I	C.Ba	Hague
.6				
.7		A.I	C.Aa	London
.8		A.I	C.Ba	Rome, Museo naz.
[.9		A.I	C.Aa	

6. Formerly in Paris, exchanged as a duplicate. Its present whereabouts are not known to me. 9. *Catalogo di Antiche Medaglie Consolari e di Famiglie Romane, raccolte da Gennaro Riccio*, Naples, 1855; pl. I, 4.

46.1	Octavian	O.I	C.Ao	London
.2		O.I	C.Bo	Vienna

<i>No.</i>	<i>Obverse portrait</i>	<i>Obv. die</i>	<i>Rev. die</i>	<i>Collection</i>
<i>L. LIVINEIVS REGVLVS</i>				
47.1	Lepidus	L.VI	R.A1	Paris
.2		L.VI	R.A1	Rome, Museo naz.
.3		L.VI	R.A1	Vienna
.4		L.VI	R.A1	
.5		L.VI	R.A1	
.6		L.VI	R.A1	London
.7		L.VI	R.A1	Glasgow
.8		L.VI	R.A1	Berlin
.9		L.VI	R.A1	Vatican
.10		L.VI	R.A1	Hague
[.11		L.VI	R.A1	
[.12		L.VI	R.A1	

4. Ars Classica sale XVIII, Lucerne, Oct. 10, 1938, no. 28 = Glendining sale (V. J. E. Ryan coll.), London, Feb. 20, 1951, no. 1581. 5. Ex Prowe coll. 8. The dies are inferred from Bahrfeldt's note, p. 59: "Sämtliche Stücke sind stempelgleich." 11. This piece is known to me only as an anonymous sulphur cast in the British Museum. It may represent the Berlin example. 12. The cast of the plates has been taken from an electrotype in the British Museum, again of unknown provenience.

[47bis Lepidus L.VII R.A1 Sydney

This strange bronze, now in the Nicholson Museum in Sydney, was included in the Glendining sale (Henry Platt Hall coll.), London, July 19, 1950, no.663, and is said to have been earlier in the Museo Kircheriano in Rome. The coin is altogether unique; it may represent a trial strike of the gold dies. The piece is rather worn, and the illustration of the sales catalogue unsatisfactory; I have been unable to obtain a cast of it. But not only is the coin difficult to examine through its reproduction, it gives every indication of having been retooled. Thus, on the obverse, the hair of the portrait is too deeply cut in back. The reverse die appears to be R.A1: the position of the figure and the legend is the same. But the letters L.RE are not cut in the same manner as on the other examples from that die: note especially the wide loop of the R on the bronze, and the dependence of the right leg from the loop, not from the vertical of the letter. Similarly, the dots of the border are too widely spaced, as indeed they are too neat and clear for a coin wasted by wear and, apparently, corrosion. I am not alto-

gether convinced that the piece is a *bona fide* product of the mint, or that, if *bona fide*, its present appearance represents the piece as it was issued. In any case the illustration available to me is inadequate, and its consideration has been almost entirely avoided in this monograph.

No.	Obverse portrait	Obv. die	Rev. die	Collection
48.1	Antony	A.IV	R.Ba	Vienna
.2		A.IV	R.Ba	
.3		A.IV	R.Ba	Naples
.4		A.IV	R.Ba	Vatican
.5		A.VI	R.Ca	Rome, Museo Cap.
.6		A.IV	R.Ba	London
.7		A.IV	R.Ba	
.8		A.VI	R.Ca	Vienna
.9		A.IV	R.Ca	Paris
.10		A.VII	R.Da	
.11		A.VI	R.Ca	Berlin
.12		A.V	R.Ca	London
[.13		A.VI	R.Ca	
[.14		A.IV	R.Aa	Holzer

2. Ars Classica sale XVIII, Lucerne, Oct. 10, 1938, no. 32 = Glendining sale (V. J. E. Ryan coll), London, Feb. 20, 1951, no. 1584. 5. Este stamp on obverse at lower left, between neck and legend. 7. Ex Imhoof-Blumer coll. 10. Ex Prowe coll. 13. R. Ratto sale (Morcom-Hands colls.), Lucerne, Feb. 8, 1928, no. 1674 = R. Ratto sale (Martini coll.), Lucerne, Feb. 24, 1930, no. 1351. The piece is distinguished by a large obverse gash. 14. Monnaies et Médailles sale XV, Basle, July 1, 1955, no. 704. Reverse gash at lower right.

49.1	Octavian	O.III	R.Bo	London
.2		O.III	R.Bo	Vienna
.3		O.IV	R.Ao	Vatican
.4		O.III	R.Bo	Paris
.5		O.IV	R.Ao	London
.6		O.IV	R.Ao	Glasgow
.7		O.IV	R.Ao	
.8		O.IV	R.Ao	Paris

7. Ex Prowe coll.

No. Obverse portrait Obv. die Rev. die Collection

L. MVSSIDIVS LONGVS/Mars

50.1	Lepidus	L.III	M.Am	Vienna
.2		L.III	M.Bm	Paris
.3		L.III	M.Cm	Vienna
.4		L.III	M.Bm	London
51.1	Antony	A.I	M.Am	Paris
.2		---	---	
.3		A.I	M.Am	St. Florian
.4		A.I	M.Bm	London
.5		A.I	M.Bm	Vienna
.6		A.I	M.Bm	Rome, Museo naz.
.7		A.I	M.Bm	Vienna
.8		---	---	
.9		A.I	M.Cm	
[.10		A.II	M.Bm	
[.11		A.II	M.Bm	

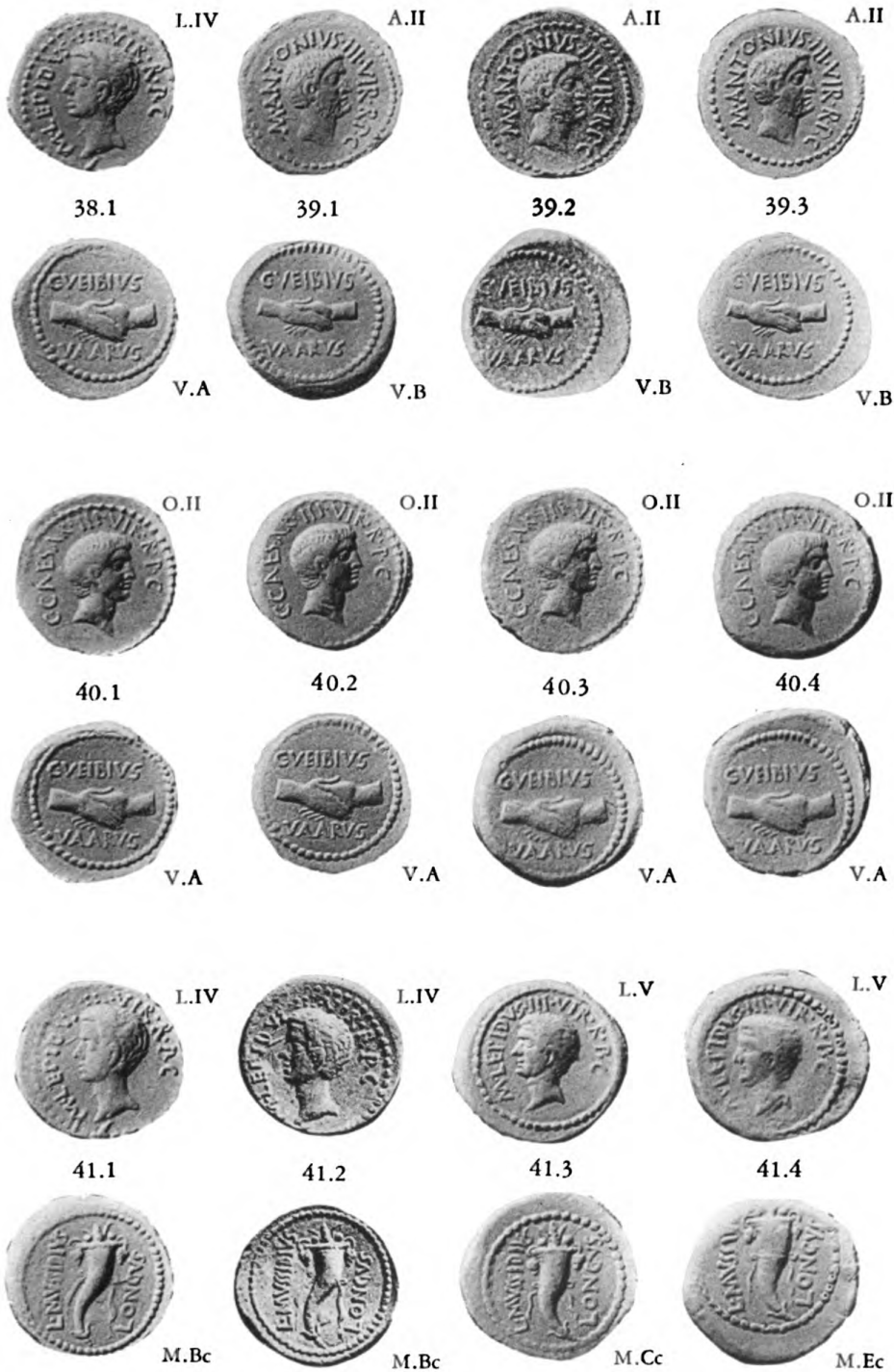
2. Attributed by Bahrfeldt to Vienna. I am informed by Dr. Guido Bruck that the piece is not and has not been in the Vienna collection. I take the reference to be a dittography of no. 51.5 or 51.7. 8. Similarly, Bahrfeldt erred in reporting a second example of this type in the Gnechi collection, now in the Museo nazionale in Rome. I presume the reference to stem from a misreading of the Octavian piece of the same reverse type, no. 52.10 below, which was in the Gnechi collection but was not included by Bahrfeldt. 9. Glendining sale (Henry Platt Hall coll.), London, July 19, 1950, no. 664. 10. A. Sambon sale (Maddalena coll.), Paris, May 7, 1903, no. 982. 11. Naville sale X, Geneva, June 15, 1925, no. 1745 = Glendining sale (V. J. E. Ryan coll.), London, Feb. 20, 1951, no. 1583.

52.1	Octavian	O.II	M.Am	Paris
.2		O.II	M.Am	Glasgow
.3		O.II	M.Am	London
.4		O.II	M.Bm	Zagreb
.5		O.II	M.Bm	Paris
.6		O.II	M.Bm	Glasgow

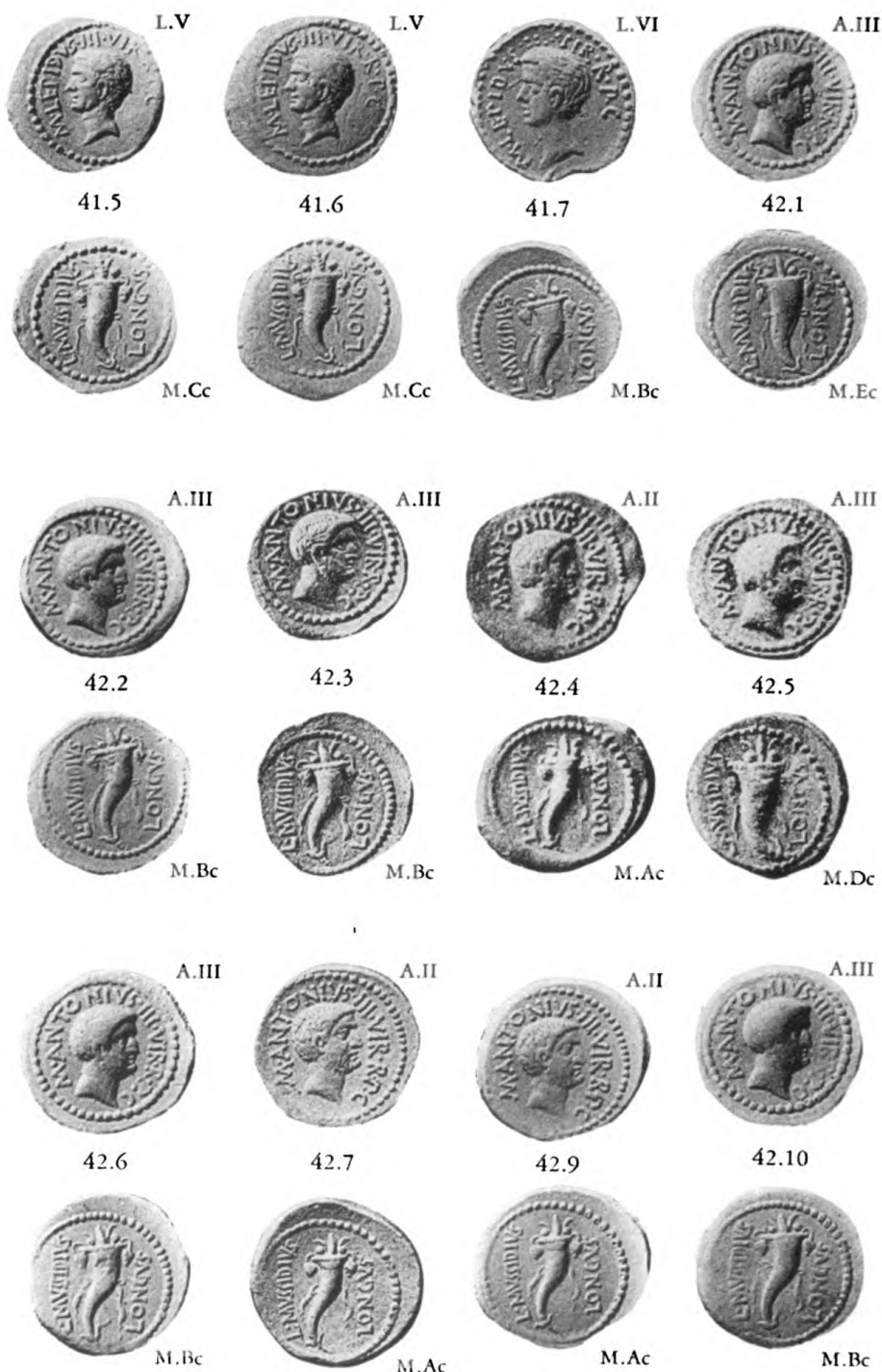
<i>No.</i>	<i>Obverse portrait</i>	<i>Obv. die</i>	<i>Rev. die</i>	<i>Collection</i>
.7		O.II	M.Bm	Vienna
.8				Munich
.9				Milan
[.10		O.II	M.Bm	Rome, Museo naz.
[.11		O.II	M.Am	New York
[.12		O.II	M.Bm	
[.13		O.II	M.Am	

8. I am informed by Dr. Kraft that the Munich example was lost during the last war, nor is a cast or a photograph to be found. 9. I have not succeeded in obtaining a cast or discovering a reproduction of the piece in Milan. 12. Glendining sale (V. J. E. Ryan coll.), London, Feb. 20, 1951, no. 1629. 13. E. Bourgey sale (Vidal Quadras y Ramón coll.), Paris, Nov. 4, 1913, no. 767.

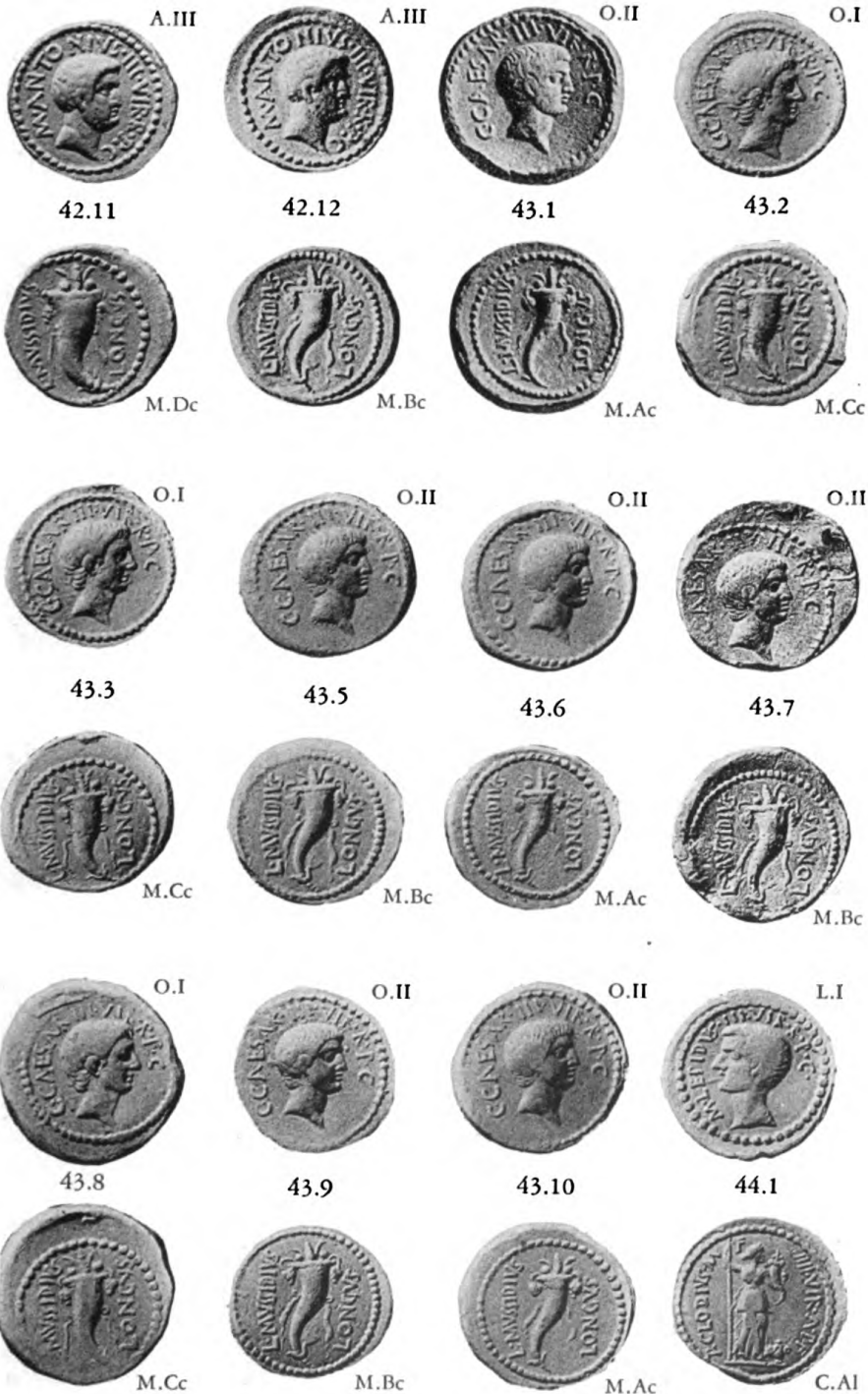
PLATES



II



III



IV



L.II

44.2



A.I

45.1



A.I

45.2



A.I

45.3



C.AI



C.Ba



C.Ba



C.Ba



A.I

45.4



A.I

45.5



A.I

45.7



A.I

45.8



C.Ba



C.Ba



C.Aa



C.Ba



O.I

46.1



O.I

46.2



L.VI

47.1



L.VI

47.2



C.Ao



C.Bo

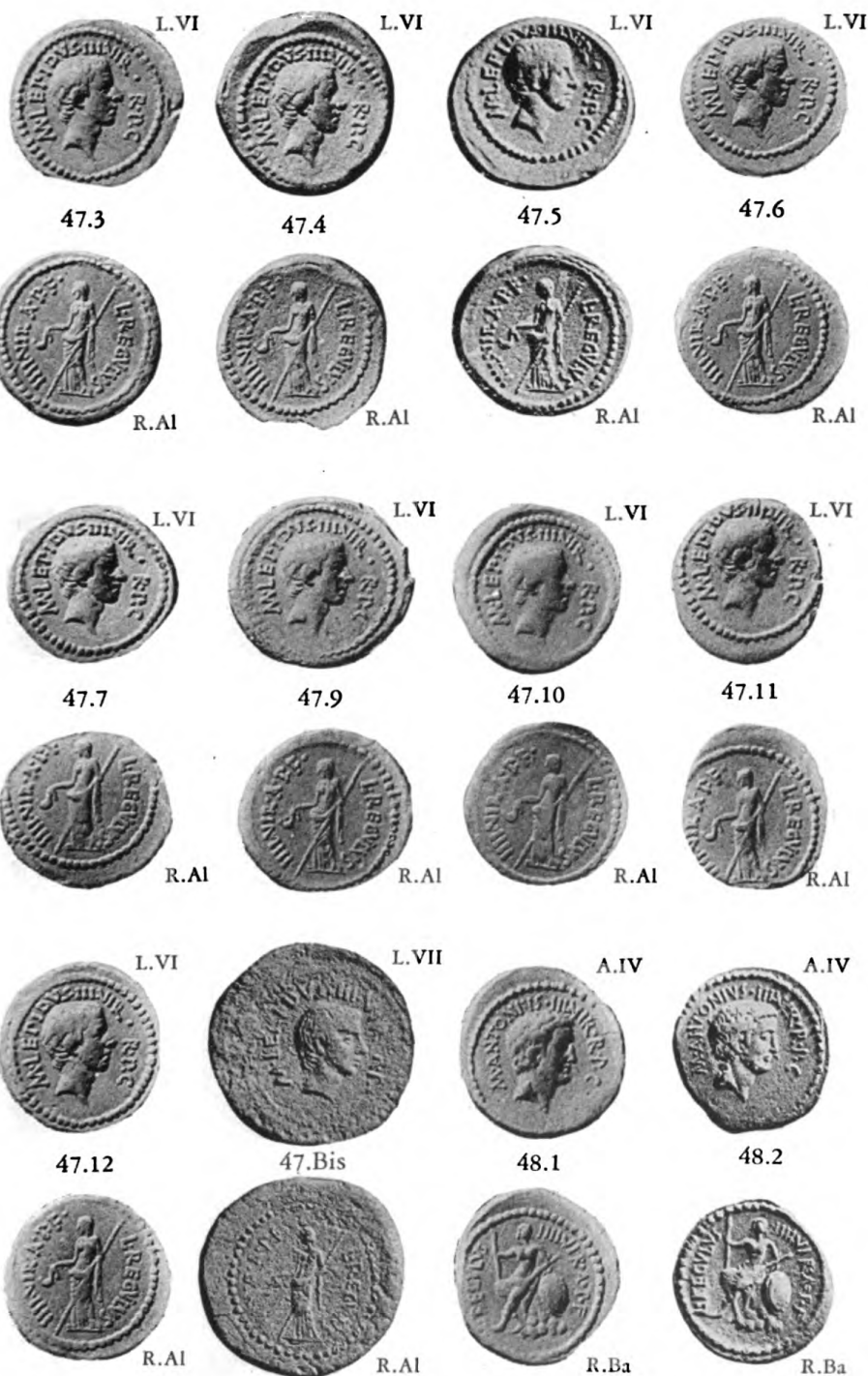


R.AI

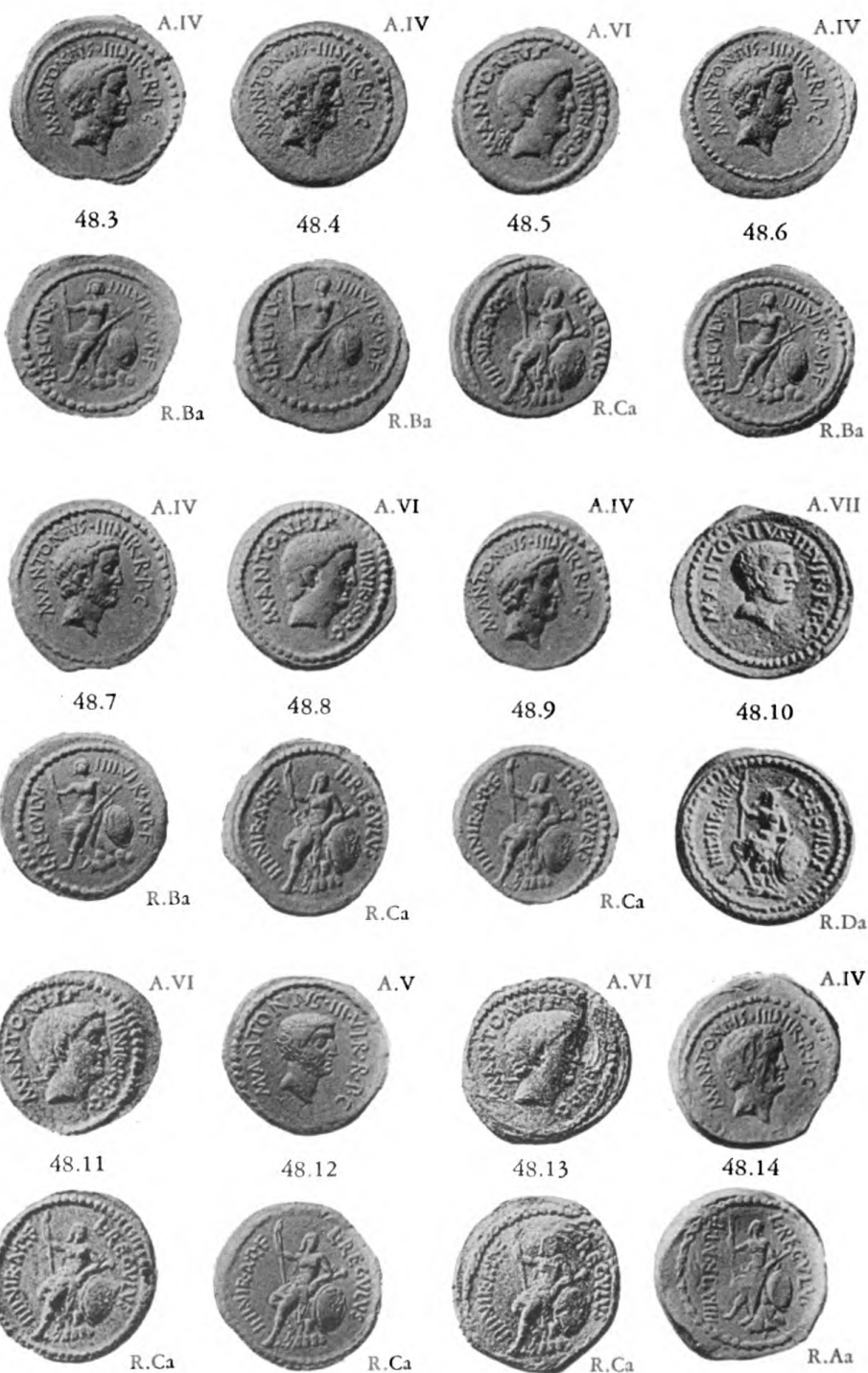


R.AI

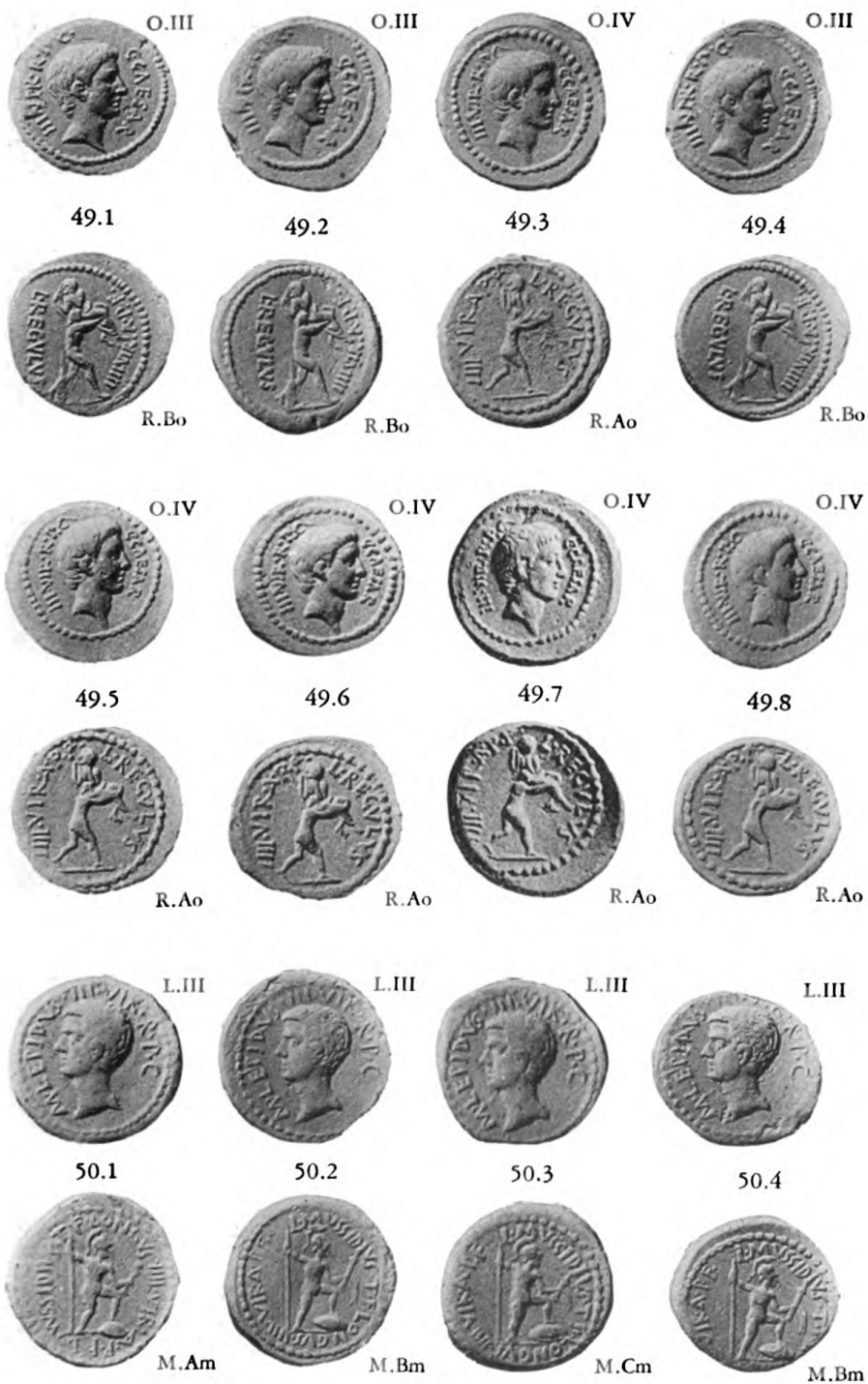
V



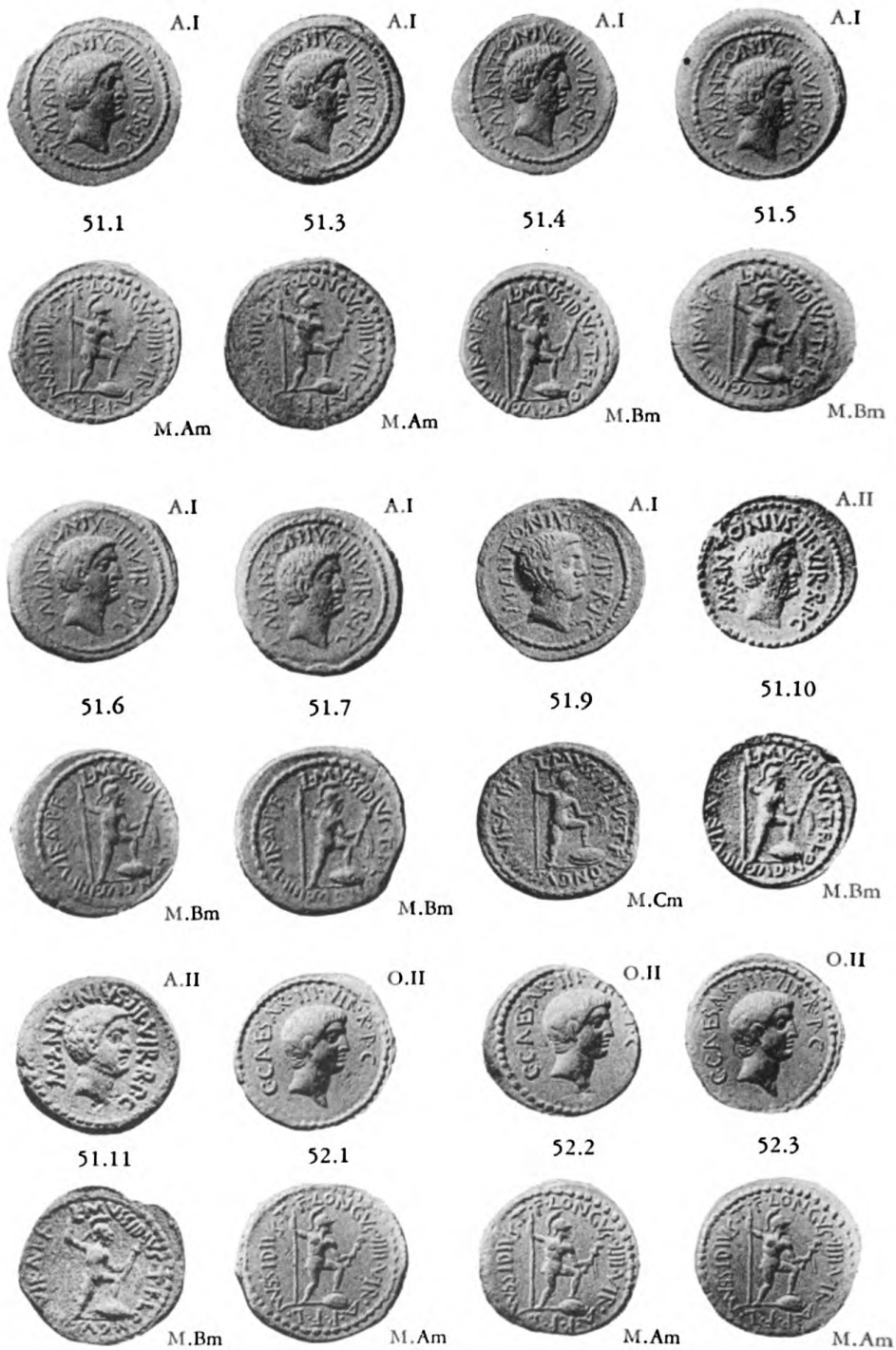
VI

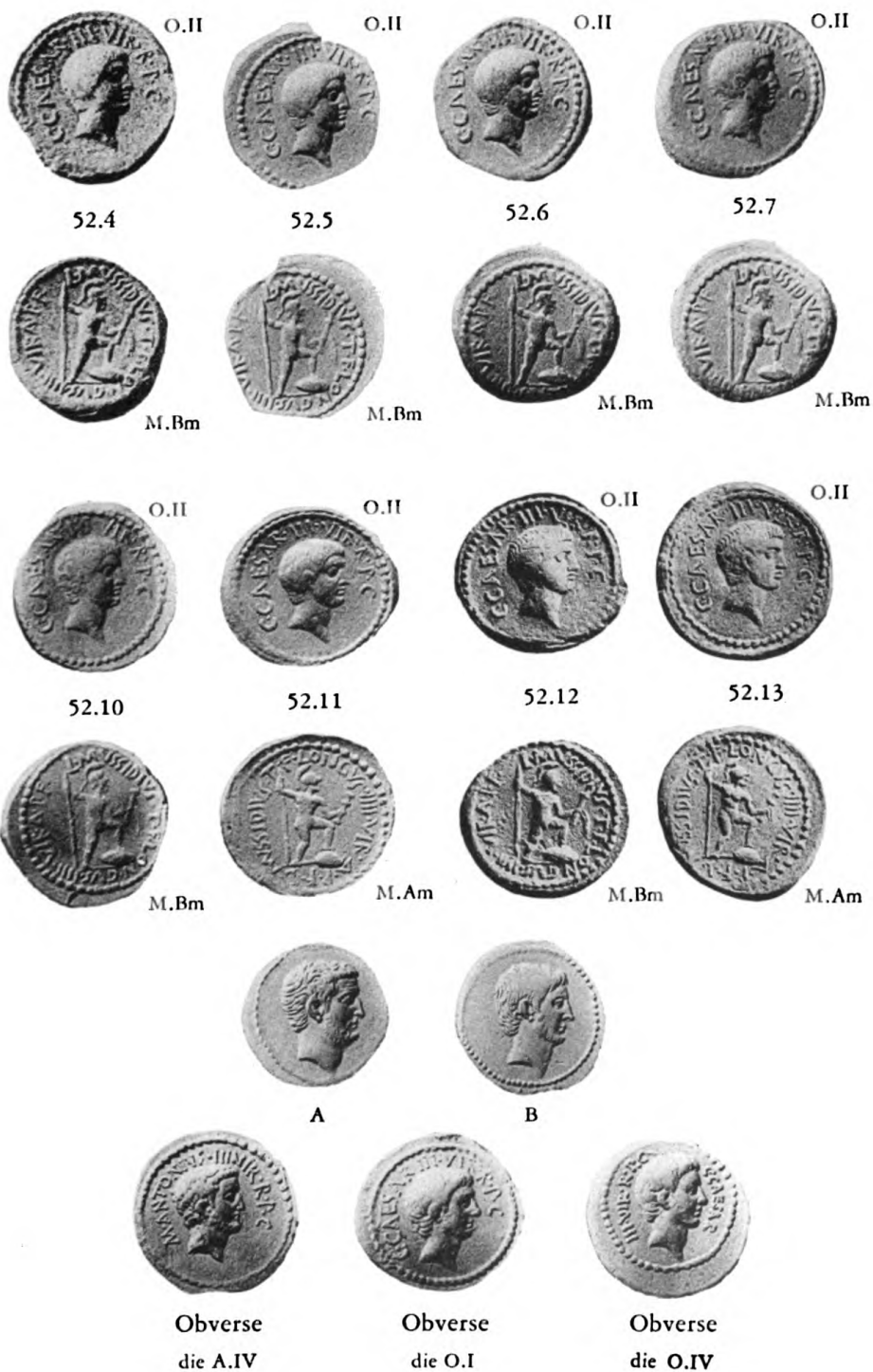


VII



VIII





CJ
35
119
no. 138

NUMISMATIC NOTES AND MONOGRAPHS

No. 138

LIGHT WEIGHT SOLIDI
AND BYZANTINE TRADE
DURING THE SIXTH
AND SEVENTH CENTURIES

By HOWARD L. ADELSON



UNIVERSITY
OF MICHIGAN
JUN 11 1957
LIBRARY

THE AMERICAN NUMISMATIC SOCIETY

NEW YORK

1957

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Number 138

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is devoted to essays and treatises on subjects relating
to coins, paper money, medals and decorations.

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Light Weight Solidi And Byzantine Trade During the Sixth and Seventh Centuries

BY HOWARD L. ADELSON



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1957

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FORWORD

The commercial relations of Byzantium with the West during the early mediaeval period have been the subject of many historical studies such as those of Henri Pirenne and Alfons Dopsch. As the older view of a catastrophic break in the stream of civilization during the period of the barbarian invasions was relegated to the history of historiography, the importance of the economic changes of the early Middle Ages assumed greater and greater significance. It is, of course, true that most of the scholars who have attempted discussions of the history of this period have made some use of the numismatic material available to them, but they have in no sense exhausted the information that may be derived from that source. In the study of the early Middle Ages numismatics has been used largely as illustrative material to support conclusions based primarily upon the literary sources. The archaeological and numismatic studies have therefore not served their true function as ancillary sciences of history. Many reasons for this situation are immediately evident, if a summary perusal is made of the secondary literature in those fields and the training of most mediaevalists is considered.

This book is not designed to cover this tremendous gap in historical scholarship, but it is an attempt to indicate that certain facts which may be derived from the numismatic and archaeological data are vital to a complete synthesis of the historical material. It is no longer possible for a mediaevalist, anymore than for an ancient historian, to relegate the vital ancillary sciences to the field of antiquarianism. From the deductions based on the results of archaeological and numismatic study of the remains of the early mediaeval period a new view of that epoch may be constructed which will encompass the literary evidence as well.

This book itself, however, did not begin as an attempt to correct this woeful lack of utilization of numismatic evidence. While I was working on a much larger study on the subject of Byzantine monetary policy from Diocletian to Heraclius, it soon became evident that the

light weight gold currency, which had received passing interest from numismatists but was generally ignored by historians, was really deserving of a much more intensive treatment. No successful attempt had been made to integrate this unique series of gold coins into the economic history of the sixth and seventh centuries. The amount of material at the disposal of a researcher had grown considerably in recent years, and several men of stature in numismatic studies had begun to collect data on these pieces. A fair number of site finds and hoards were known which had a direct bearing on the problem, and the general situation had never been so favorable for an attempt at a solution. In addition the American Numismatic Society was very fortunate in securing the participation of Mr. Philip Grierson of Gonville and Caius College of Cambridge University for the Summer Seminar in Numismatics of the year 1954. The opportunity to discuss the many problems which naturally arose in connection with this study with a man of Mr. Grierson's stature in numismatic studies was most fortunate. Mr. Grierson's help was invaluable for a number of reasons not the least of which was the fact that he placed all of the photographs of the gold coins in his own collection as well as those of the light weight solidi which he had encountered in the course of his own studies at my disposal. Mr. Grierson also analyzed his own coins by the specific gravity technique, and thus he made available data which was previously unknown. For all of these things and most importantly for his willingness to discuss individual problems, I wish to acknowledge a deep sense of gratitude to Mr. Grierson.

Since my own training has been in history, it was, of course, vital that there be some scholar who would aid me in the purely technical aspects of numismatics. In this capacity Mr. Louis C. West of Princeton University and President of the American Numismatic Society has been of invaluable assistance. The most technical aspects of this work have been perused by Mr. West, and many of his suggestions have been incorporated into this book. If there is any merit to be found in that aspect of this work, it is largely the result of the aid and counsel of my teacher, Mr. West, who introduced me to the value of numismatic study while I was a graduate student and has done so very much to encourage my researches.

Sole responsibility for the hypotheses and historical explanations put forward in the course of this book must rest with me, but the debt

which is owed to my teachers, Professor Theodor E. Mommsen of Cornell University and Professor Joseph R. Strayer of Princeton University, cannot be calculated. Both of them very kindly consented to read the manuscript, and their suggestions have been incorporated into the finished product. The techniques and methods which were utilized in the work were learned in the seminars conducted by them, and my interest in this field of historical research is the result of many most enjoyable hours spent stuying under their tutelage.

This book, however, would have been impossible without the aid of so many scholars who sent me casts or photographs of coins and notes regarding these pieces. Among these should be numbered Dr. Theodore V. Buttrey, Jr. of the Classics Department of Yale University who secured photographs of the coins in the Hermitage through the help of Dr. L. Belov of the staff of the Hermitage, and who also managed to obtain photographs of the coins in the Poltava Museum of Regional Studies from the manager of that museum, Dr. V. T. Shevtshenko. Dr. Buttrey's kind efforts, however, extended even further, and with his help and the assistance of Dr. Maria R. Alföldi and Dr. L. Huszár, Keeper of Coins and Medals of the collection in Budapest, casts of all of the light weight pieces in that collection were also secured. In addition the aid and assistance of Mr. R. A. G. Carson of the Department of Medals and Coins of the British Museum, M. Jean Babelon, Conservateur en chef du Cabinet des Médailles of the Bibliothèque Nationale, Dr. E. Erxleben of the Staatliche Museen zu Berlin, Dr. A. N. Zadoks-Jitta of the Royal Cabinet in the Hague, Dr. W. D. Van Wijngaarden of the Rijksmuseum Van Oudheden te Leiden, Dr. K. Kraft, Konservator of the Staatliche Münzsammlung in Munich, Dr. Eduard Holzmaier of the Bundessammlung von Medaillen, Münzen und Geldzeichen in Vienna, and Mr. Enrico Leuthold of Milan have been most important. The grateful thanks of the author for all of the specimens, many of them unpublished, furnished by these scholars cannot be expressed in terms forceful enough to convey the full extent of the debt owed to them. My sincere thanks are also due to the authorities of the Museum in Nicosia, Cyprus, for permission to publish Coin no. 79a.

THE STATE AND NATURE OF THE PROBLEM

It is to the unusual specimens in coinage that the historian is most often drawn in his search for new information regarding the past. The continued repetition of older types without any seemingly significant alteration is not likely to catch the eye of the scholar, nor is it probable that it will excite a great deal of discussion or interest. Perhaps this is in part the explanation for the fact that a rather surprising series of solidi which are to be distinguished primarily on the basis of the marks in the exergues have received only passing numismatic comment and have never been adequately studied from the historical point of view.

When it is remembered for how long a period of time the study of coinage has fascinated men of culture it is strange to note that it was only in 1910 that a scholar commented upon the series of light weight solidi with unusual exergual markings. Dr. Arnold Luschin von Ebengreuth, in his study of the denarius of the Salian Law, made use of the fact that such a series of light weight solidi marked BOXX existed.¹ He was, however, aware of the existence of only a few of these pieces, and the entire scope of the problem was not evident to

¹ Dr. Arnold Luschin von Ebengreuth, "Der Denar der Lex Salica," *Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften in Wien*, Phil.-hist. Klasse, CLXIII (1910), Abh. 4, pp. 34-39. See Karl August Eckhardt, "Zur Entstehungszeit der Lex Salica," *Festschrift der Akademie der Wissenschaften in Göttingen*, 1951, pt. II, pp. 16-31; and *Pactus Legis Salicae I. Einführung und 80 Titel-Text* (Göttingen: Musterschmidt, 1954), pp. 186-192, which is volume III in the *Westgermanisches Recht* series of the *neue Folge* of the *Germanenrechte* published by the Historisches Institut des Werralandes. Eckhardt argues very strongly for greater antiquity for the Lex Salica. Unfortunately he is rather cavalier in his treatment of the numismatic evidence. Also see H. Brunner, *Deutsche Rechtsgeschichte* (2nd edition: Leipzig, 1906), I, pp. 312-313, and Hugo Jaekel, "Die leichten Goldschillinge der merowingischen Zeit und das Alter der Lex Salica," *Zeitschrift der Savigny-Stiftung für Rechtsgeschichte*, Germ. Abt., XLIII (1922), pp. 103-216. The literature on this subject of the date of the Salic law is very extensive, but it is rather indirectly related to the true Roman light weight solidi. The barbarian coinages are used to date the Germanic law codes, but these coinages are largely imitations of Roman coinage.

him. Only a few emperors, Justinian, Justin II, Phocas, Heraclius during his sole reign, and Heraclius and Heraclius Constantine during their joint reign, were represented on the solidi that he studied.

It is, of course, true that a certain number of these light weight Byzantine gold pieces had been reported in sale catalogues on several occasions prior to the date of Luschin von Ebengreuth's study, and also it is true that Sabatier as well as Wroth had noted the existence of a few specimens of this series, but there was still no body of material collected which warranted any study of the series itself. Luschin von Ebengreuth could use these coins in his study of Frankish coinage and the Salian Law to indicate a Byzantine adumbration of the subsequent decline in the weight of the Frankish solidi and trientes, but he could derive nothing from them regarding the policies of the Byzantine emperors whose names appeared on these strange pieces.

By 1923, however, enough material had been collected to make it possible for Ugo Monneret De Villard to write the first numismatic study devoted solely to the light weight solidi.² In the intervening period a series of finely written and well illustrated sale catalogues which included a number of such coins had appeared, and the monumental Byzantine coin catalogue of Count Tolstoi had been published. Thus it was possible for Monneret De Villard to discern the true limits of this series of solidi, and though the catalogue which is included with the present study is more than three times as long as that of Monneret De Villard nonetheless the first truly significant collection of the numismatic data was made by him.

From a search of all of the literature available to him and from research in the various major museums of Europe, he discovered that there was not one series of light weight solidi, but rather that there were several series of such coins each bearing a different set of markings

² Ugo Monneret De Villard, "Sui Diversi valori del Soldo Bizantino," *Rivista Italiana di Numismatica*, XXXVI (1923), pp. 33-40. This article must be used with great caution. Several of the coins which appear twice in separate publications are listed as separate and distinct pieces. No account was taken of the condition of the coins in discussing the metrological aspects of the problem, and the techniques used by Monneret De Villard are susceptible to serious errors. He did not distinguish the pieces of barbarian origin.

in the exergue on the reverse. It was also evident, when the material had been gathered, that these light weight coins were not issued intermittently by several emperors of the sixth and seventh centuries, but rather that they formed a series which extended in unbroken fashion from the reign of Justinian to that of Constantine IV Pogonatus.

As a result of this numismatic inquiry into the nature of these coins Monneret De Villard concluded that there were at least seven different varieties of markings that appeared in the exergue on the reverses of Byzantine solidi which would indicate that the coins in question were light. Unfortunately he did not distinguish between the authentic Byzantine gold pieces and those of barbarian manufacture. His list of markings would therefore be somewhat smaller if it were devoted only to the genuine Byzantine coins. The marks as he listed them, however, were 1) OB*+*, 2) OB XX or OB·XX, 3) OB⁺_{*} or OB+*, 4) BOXX, 5) БОГK, 6) CXNXU, and lastly 7) CX+X÷. The weights of almost all of the coins bearing these marks in the exergue were clearly below the lowest weights which one might reasonably expect from solidi which had originally been struck at full weight. Of all the markings listed, however, Monneret De Villard felt that only two series could be grouped in which he was possessed of a sufficient number of weights to postulate any hypothesis regarding the theoretical weight at which these coins had been struck. The forty-two coins which were contained in groups two and four he considered as one series. This he might logically do because there was nothing more than a transposition or metathesis of the first two letters of the exergual mark involved in distinguishing them from one another. These coins when considered as a single series showed an average weight of 3.657 grammes according to his calculations. A second series of coins, he felt, might be constructed of those coins which had the exergual marks in groups one (OB*+*) and three (OB+*).³ The three coins that were listed with the mark OB*+* had a mean weight of 3.866 grammes, while the nine coins with the mark

³ There is some discrepancy between the earlier and the later parts of the article in the reproduction of these marks in the exergues of the coins. His meaning, however, is on all occasions quite clear, and the correct forms have been used in our text.

¹•

OB+• had an average weight of 3.96 grammes according to the calculations of Monneret De Villard.⁴

The three mean weights which had been obtained by this process were all well below what might be expected of solidi which had originally been struck at full weight. Theoretically and actually the solidus had been struck *al-pezzo* at 1/72nd of a Roman pound. This fact was attested from the legal texts in the Theodosian and Justinian Codes as well as from the marks of value which were found on certain of the earlier solidi. Luschin von Ebengreuth had also demonstrated most scientifically that one could hardly expect a weight of less than 4.35 grammes for any unclipped solidus. This is in accord with our knowledge concerning the weight of the Roman pound. It is now generally conceded among numismatists that the solidus must have been struck at a theoretical weight of 4.55 grammes and that the *siliqua auri* was theoretically 0.1895 grammes.⁵ Monneret De Villard, however, had adopted the weight of the Roman pound which Naville had calculated⁶. According to the system set forth by Naville the Roman pound weighed 322.56 grammes, and the *siliqua auri*, which it is quite certain was 1/1728th of a pound, was 0.1867 grammes. Since there were twenty-four siliquae or four scruples in the normal solidus of 1/72nd of a pound, the theoretical weight of the solidus, according to Naville, would be 4.48 grammes. It can be seen immediately that there is only the slight difference of seven-hundredths of a gramme between the theoretical weight of the

⁴ Monneret De Villard omitted one of the coins marked OB+• from his calculations because the weight of the piece was 4.50 grammes, and therefore it was within the range of true full weight solidi. He also omitted the one coin marked OB† though the weight was 3.75 grammes. See Coin no. 29 of the Catalogue. This is not a good method of procedure because it prejudices the result by excluding unfavorable data.

⁵ The range of 24–25 carats would therefore have been 4.55–4.74 grammes, and that from 23–24 would have been 4.36–4.55 grammes.

⁶ A. Naville, "Fragment de métrologie antique," *Revue Suisse de Numismatique*, XXII (1920), pp. 42–60. It must be stated that there is no unanimity concerning the weight of the Roman pound, but the consensus of scholarly opinion seems to favor the traditional weight of 327.45 grammes. All of the figures quoted in this discussion of Monneret De Villard would therefore have to be adjusted to accord with this, if they were to be used in any further discussion of the problem. Since this is not the case, it seemed best to set forth his ideas as he wrote them and to use Naville's calculations in the description.

solidus as calculated by Naville and that according to the traditional view.

Sixty coins were listed in the article by Monneret De Villard according to the rulers and with notations regarding the peculiar markings in the exergue on the reverses. When, however, the coins were grouped according to the marks in the exergues it was found that only in one instance, those inscribed BOXX and the like, was there really a sufficient number of coins to warrant an attempt at a scientific treatment. In another case, that of the coins marked OB+*, only some hypotheses could be put forward.

Unfortunately Monneret De Villard did not make use of the frequency curve method of statistical analysis of the metrological data which he had accumulated, but he resorted to the less scientific, and therefore more uncertain, practice of calculating mean weights. As a result he was only able to discuss with any degree of confidence those coins which he had assembled in his first group, a total of forty-two specimens.

Monneret De Villard concluded that the solidi of this first series, i.e., those with a mean weight of 3.657 grammes were struck at twenty siliquae to the solidus (theoretical weight according to Naville's system of 3.734 grammes). He was aware of the fact that the siliqua was mentioned several times in the *Edictum Rothari* as well as in the *Capitula Extravagantia* of the Lombard laws,⁷ and he found, as Brunner had noted much earlier, that in the *Glossarium Matricense* 63 it was stated that *Siliqua vicesima pars solidi est*, while the *Glossarium Cavense* 104 and 163 asserted *Siliquas. Id. vicesima pars solidi* and *Siliquas, id est vicesima pars solidi, ab arbore, cuius semen est, vocabulum tenens*.⁸ Monneret De Villard held that since the glossators themselves believed this valuation of the solidus at twenty siliquae it indicated quite clearly that they knew that it corresponded to the actual worth of the solidi which circulated during the reign of Rothari (636–652 A.D.). The reign of Rothari, moreover, was roughly contemporary with that of Heraclius, and the greatest number of light

⁷ Monneret De Villard cites the *Capitula Extravagantia* as the *Memoratorium (§ de caminata)*. It is normally cited as *Merced*.

⁸ Ed. Bluhme, *MGH., Legum*, IV, pp. 651, 655–656. All these are glosses of the same passage, *Roth.*, 346.

weight solidi were struck with the name of Heraclius imprinted on them. From these facts and premises Monneret De Villard concluded that the light weight solidi of twenty siliquae were actually referred to in contemporary texts and probably were a part of the monetary system.

In doing this, however, he erred most seriously, probably because of the fact that his training was that of a numismatist and not a historian. His use of the legal texts does not meet the requirements of historical technique. The *Edictum Rothari*, it is true, was issued in 643 A.D. during the reign of that Lombard king, and the *Capitula Extravagantia* are attributed to either the reign of Grimoald (662–671 A.D.) or Luitprand in the first half of the eighth century. The word *siliqua* does occur in both cases, but it is not defined within the text but only in the two glosses that have been quoted. The glosses which are cited by Monneret De Villard in support of his position that these *siliquae* were the twentieth part of the *solidus* are more recent than the legal texts themselves. They may safely be put into Carolingian times or later, when the *solidus* in western Europe was uniformly valued at twenty *siliquae*. The two manuscripts in which these glosses occur are related in the *stemma*. They come from a common source.⁹ That source seems to be a relatively late one, and these texts are more valuable for the later period of Lombard law. The *Codex Matritensis regius D 117* was probably written in the region of Beneventum or Salerno in the tenth century.¹⁰ While the *Codex Cavensis* was most likely produced in the region of Beneventum about the year 1005 A.D.¹¹ It is probable that the glossator himself was a Beneventan of about the same period.¹² The actual text of the glosses is apparently derived from Isidore of Seville (*ca.* 560–636 A.D.), but Isidore retains the older valuation of the *solidus* at twenty-four *siliquae*.¹³ Perhaps, as is most

⁹ MGH., *Legum*, IV, pp. XXIX and XXXIII.

¹⁰ MGH., *Legum*, IV, p. XXVIII.

¹¹ MGH., *Legum*, IV, p. XXX.

¹² MGH., *Legum*, IV, pp. 651 ff. The glosses are reproduced there. Cf. *Edicta Regum Langobardorum, Historia Patria Monumenta* (Augusta Taurinorum, 1855), VIII, p. CX, and Bluhme, "Leges Langobardorum," *Archiv der Gesellschaft für ältere deutsche Geschichtskunde*, V, p. 255.

¹³ Isidore of Seville, *Etymologiarum*, XVI, 24: "*Siliquae id est vicesima quarta pars solidi, ab arbore, cuius semen est, vocabulum tenens.*"

likely, the influence of the Frankish monetary system was the stimulus for the lower valuation of the solidus among the Lombards.¹⁴ When this change was accomplished, however, must remain uncertain. It is quite definite that the glossators referred to by Monneret De Villard were not giving us exact information regarding conditions in the time of Rothari and Grimoald, but rather that they were utilizing the valuations known in their own time. The glossators' knowledge of the monetary system in force during the reign of Rothari was very likely much less than that available to numismatists and historians today. In addition these glosses can hardly be used to prove that the Byzantine government issued such light weight solidi for normal circulation within the Empire during the seventh century, since they are derived from a later period and they comment on a matter of Lombard and not Byzantine law.

In studying the second group of coins, those marked OB*+* and OB+*, Monneret De Villard found himself seriously hampered by an insufficiency of data. Three coins marked OB*+* had an average weight of 3.866 grammes, and the nine pieces marked OB+* had a mean weight of 3.96 grammes. This seemed to indicate a theoretical weight of approximately twenty-one siliquae which should have corresponded to 3.92 grammes according to the system worked out by Naville and accepted by Monneret De Villard. If this were so, then Monneret De Villard suggested that the mark which he transcribed as -* might be explained as — +*, and that the two X's would thus be combined into the single sign *. The total would then be twenty-one. Unfortunately such an explanation is hardly satisfactory because, as will be shown, there are no solidi marked -*, and, furthermore, the coins marked OB*+* and those marked OB+* or OB*+ all belong to a single group. The marks OB+* and OB*+ are merely abbreviations of OB*+*. These asterisks cannot therefore be taken as the combination of two X's or the total would be in excess of forty rather than twenty-one.

These solidi, however, were supposedly struck at approximately 3.92 grammes or about 1/84th of a Roman pound.¹⁵ Monneret De

¹⁴ Cf. Brunner, *Deutsche Rechtsgeschichte*, I, p. 313, note 7.

¹⁵ Monneret De Villard, "Sui Diversi valori del Soldo Bizantino," *Rivista Italiana di Numismatica*, XXXVI (1923), p. 38, suggests also that the miliarese

Villard, following Luschin von Ebengreuth, pointed out that some of the pseudo-imperial solidi struck in Gaul during the early Merovingian period were issued at approximately the same average weight.¹⁶ Some of these Frankish gold pieces were issued with

or large silver coin prior to the reign of Justinian was struck at $1/84$ th of a pound. It would thus be a silver counterpart of the light weight solidus. Actually he is in error, for the silver coins were not struck at a standard of $1/84$ th of a Roman pound at any time during at least a two hundred year period before the reign of Justinian, nor did Justinian himself strike such silver coins. Heavy silver coinage is noticeably absent in the fifth century. When the quantity of silver coins issued began to rise in the first quarter of the sixth century it seems that a heavy coin of $1/72$ nd of a pound, the counterpart of a full weight solidus, was struck, but none of $1/84$ th of a pound were issued. A solidus at $1/84$ th of a pound would actually be equivalent to 20.57 siliquae. Monneret De Villard has apparently rounded this off to twenty-one siliquae. Twenty-one siliquae would weigh 3.9207 grammes according to Naville. A solidus of twenty siliquae would actually be struck at about $1/82$ nd of a pound while one of twenty-one siliquae would be struck at about $1/86$ th of a pound. See also Theodor Mommsen, *Histoire de la monnaie romaine*, trans. Duc de Blacas (Paris, 1873), III, p. 77, note 2.

¹⁶ He cites E. Babelon, "La Silique romaine, le sou et le denier de la loi des Francs," *La Gazette Numismatique*, VI (1902), pp. 72-73, to that effect. The point is most clearly made by Luschin von Ebengreuth, "Der Denar der Lex Salica," *Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften in Wien*, Phil.-hist. Klasse, CLXIII (1910), Abh. 4, pp. 1-89, but especially pp. 22-39, which indicates that sometime after 580 A.D. the Merovingians began to strike their solidi on a standard of $22 \frac{1}{2}$ siliquae and that this standard rapidly fell to twenty-one siliquae to the solidus. Prior to 580 A.D., he maintained, the Merovingians had struck their gold on the Constantinian standard of twenty-four siliquae to the solidus. A further reduction in the weight of Merovingian gold coins to twenty siliquae probably took place in the first decade of the seventh century, but in any event, it was an accomplished fact during the reign of Chlotar II (613-629 A.D.). The exact date of the decline to twenty siliquae to the solidus, according to Luschin von Ebengreuth, cannot be firmly established. S. E. Rigold, "An Imperial Coinage in Southern Gaul in the Sixth and Seventh Centuries," *Numismatic Chronicle*, Series 6, XIV (1954), pp. 93-133, discusses this pseudo-imperial gold coinage. He suggests that it was begun during the last years of the reign of Justin II, probably about 574 A.D. His work supersedes that of Luschin von Ebengreuth. Cf. Maurice Prou, *Catalogue des monnaies françaises de la Bibliothèque Nationale. Les Monnaies mérovingiennes* (Paris, 1892), pp. XIV-XXVII, esp. pp. XXIV-XXV. A. Duchalais, "Poids de l'aureus romain dans la Gaule," *Revue numismatique*, V (1840), pp. 261-265, and Maximin Déloche, "Explication d'une formule inscrite sur plusieurs monnaies mérovingiennes," *Etudes de numismatiques mérovingiennes* (Paris, 1890), pp. 227-235, reprinted from *Revue archéologique*, 2^e série, XL, provided the basic information upon which Luschin von Ebengreuth determined his dating. See note 1.

imperial portraits and they bore marks of value, XXI in the case of the solidi and VII in the case of the trientes. These Frankish coins will be examined more closely at a later point, but it should suffice for the present merely to indicate that the existence of such coinage from mints in southern Gaul is well attested.¹⁷

There was also a certain amount of literary evidence that bore on the question of such light solidi which weighed less than 1/72nd of a pound, and Monneret De Villard dealt with a small portion of that evidence. He cited a *Novella* of the Emperor Majorian in which that Emperor required that all solidi of full weight be accepted by the tax collector with the one exception of the Gallic solidi, the gold of which was of lesser value.¹⁸ This legal text was issued in 458 A.D. and therefore precedes the issuance of the peculiar series of light weight solidi in which we are interested by at least eighty years and possibly as much as a century. That the Romans had certain problems connected with the unofficial striking of solidi of light weight during the fourth and fifth centuries cannot be doubted in view of the extant laws regarding gold coins, but these laws cannot be used to indicate that an imperial gold coin was struck at a lighter standard. The entire body of literary evidence will be discussed at a later point, but it should suffice for the present merely to point out that the particular *Novella* just cited

¹⁷ Another series marked VIII in the case of the trientes indicates that the change was clearly understood.

¹⁸ *Nov. Maioriani*, VII, 1, 14 (458 A.D.) (ed. Th. Mommsen and Paul M. Meyer, *Codex Theodosianus*, II, p. 171). "*Praeterea nullus solidum integri ponderis calumniosae improbationis obtentu recuset exactor, excepto eo Gallico, cuius aurum minore aestimatione taxatur; omnia concussionum removeatur occasio.*" This passage and several other similar ones have formed the subject of a great number of articles. Adrien Blanchet, "Les ((sous Gaulois)) du V^e siècle," *Le Moyen Age*, 2^e série, XIV (1910), pp. 45-48, suggested that the words *minore aestimatione* indicated gold that was debased and not coins which were not of full weight. He therefore interpreted this passage in terms of the few debased coins found in the Dortmund hoard. Wilhelm Kubitschek, "Zum Goldfund von Dortmund," *Numismatische Zeitschrift*, neue Folge III (1910), pp. 56-61, discusses the view taken by Blanchet, and he goes even further in formulating the theory that barbarous coinages of poor quality were an increasing problem for the Romans during the period of the migrations, but that by the mid-sixth century the Byzantines had conceded defeat in this matter. He probably goes too far. Maurice Prou, *Les Monnaies mérovingiennes*, p. XVI; and E. Babelon, "La Silique romain, le sou et le denier de la loi des Francs Saliens," *Journal des Savants*, Février 1901, p. 120, note 1, state their belief that a lighter weight coinage is meant. See chapter II for a further discussion of this *Novella*.

cannot refer to the light weight solidi which form the subject of this book.

In addition to that *Novella*, however, Monneret De Villard refers to several other documents which should be treated in connection with a critique of his work. One of the documents to which reference is made is the so-called *Formula Lindenbrogiana* LXXXII, but this can easily be shown to be a spurious reference because of the variants.¹⁹ Two other instances in which the so-called *solidus Gallicus* is mentioned are known from the correspondence of Gregory the Great, and Monneret De Villard also makes reference to them. In one letter Gregory speaks of the *solidi Galliarum, qui in terra nostra expendi non possunt, apud locum proprium utiliter expendantur*.²⁰ In another letter of Gregory to Dynamius, the Patrician of the Gauls, the sum of four hundred *Gallicanos solidos* is mentioned.²¹ These references to the *solidi Gallici* can easily be explained on the basis of the Frankish coinage which was truly light weight in the last decade of the sixth century and could not be used within the confines of the Byzantine Empire.

Monneret De Villard, however, recognized that his case was all too weak when bolstered only by references to the coinage of Gaul which Luschin von Ebengreuth had already proven to be of light weight in

¹⁹ This reference was first given by C. Du Cange, *Glossarium Mediae et Infimae Latinitatis* (Paris, 1733-36), s.v. *Solidus*, and it has been repeated by many authors. E. Babelon, *Traité des monnaies grecques et romaines* (Paris, 1901), I, pt. I, col. 540, cites it as a formula from the collection of Marculfe. Actually this document is of Salic origin and is given in de Salis' edition (*MGH., Leges*, Sectio V, p. 77) as *Formula Salica Lindenbrogiana* no. 16. This is equivalent to Eugène de Rozière. *Recueil des Formules usitées dans l'empire des Francs du Ve au Xe siècles* (Paris, 1859-71), no. 242 or in the Rockinger edition no. 19. In these later and more scholarly editions the crucial phrase, *solidos francos*, is given as *solidos tantos* or *valente solidos tante*. In the Frankfurt edition of 1631 of the *Codex Legum Antiquarum* of Lindenbrog and in that of Baluze which is included in ed. J. Mansi, *Amplissima Collectio Conciliorum* (Paris, 1901-27), XVIIIbis, col. 536, the phrase appears as *solidos francos tantos*. This is not even given as a variant in the better editions.

²⁰ Gregory I, *Registrum*, VI, 10 (*MGH., Epistolae*, I, p. 389). The editors date this letter as of Sept. 595 A.D.

²¹ Gregory I, *Registrum*, III, 33 (*MGH., Epistolae*, I, p. 191). This letter is dated by the editors as having been written in April 593 A.D. Monneret De Villard cites these two letters from the Migne edition in the *Patrologia Latina*, LXXVII, pp. 799 and 630.

the last two decades of the sixth century. This Frankish coinage had been adopted after Justinian had instituted the striking of light weight solidi. As a final bit of literary proof that light weight solidi of approximately 1/84th of a Roman pound were issued by the Byzantine government Monneret De Villard cited a law of Valentinian I of the year 367. This law, he maintained, stated explicitly that a solidus of 1/84th of a Roman pound was known to the Romans. That law may be translated as follows:

On account of the mining tax, for which
the custom peculiar to it must be retained,
it is determined that fourteen ounces of gold
dust be brought for each pound (of metal).²²

²² *C. Th.*, V, 19, 4 (ed. Mommsen and Meyer, *Codex Theodosianus*, I, pt. II, p. 558): "Imp. Valentinianus et Valens AA. ad Germanianum Com(item) S(acrarum) L(argitionum). *Ob metallicum canonem, in quo proprio consuetudo retinenda est, quattuordecim uncias ballucae pro singulis libris constat inferri.* Dat. VI id. Ian. Rom. Lupicinio et Ioviano cons." This is equivalent to *C. Just.* XI, 7, 2 (ed. Krueger, *Corpus Iuris Civilis*, II, p. 430). It is a portion of the same law to which *C. Th.*, XII, 6, 13, setting up the standard of seventy-two solidi to the pound for bullion payments to the Treasury, belongs. Because of this A. Soetbeer, "Beiträge zur Geschichte des Geld- und Münzwesens in Deutschland," *Forschungen zur deutschen Geschichte*, I (1862), p. 295, said that the *propria consuetudo* mentioned was the custom of the Fiscus in collections to take eighty-four solidi from the gold mine operators. Mining as an industry in the Roman state, however, was peculiar unto itself. The entire title XIX of Book X of the *Theodosian Code* is headed *De Metallis et Metallariis*. A law of 365 (*C. Th.*, X, 19, 3) places a charge of eight scruples on those entering the mining profession voluntarily. A law of 392 (*C. Th.*, X, 19, 12) taxes every goldminer in Pontus and Asia seven scruples per year. Goldmining was a peculiar industry, and it is most likely that the mine operators were using a peculiar pound of eighty-four solidi. E. Babelon, *Traité des monnaies grecques et romaines* (Paris, 1901), I, pt. I, col. 539, however, maintained that the text in question "*renferme aussi implicitement la mention de la taille à 84.*" The text of a law of 325 A.D. in the *Theodosian Code* which would indicate light weight solidi has been preserved in two separate fragments which are recorded in both the *Theodosian* and *Justinian Codes*, and whose order is indicated in the *Theodosian recension*. *C. Th.*, XII, 7, 1; XII, 6, 2 (ed. Mommsen and Meyer, *Codex Theodosianus*, I, pt. II, pp. 722-3; 713) = *C. Just.*, X, 73, 1; X, 72, 1 (ed. Krueger, *Corpus Iuris Civilis*, II, pp. 427; 426). In the later recension the important statement regarding the weighing of solidi has been omitted. Whether or not anything intervened between the two fragments as received cannot be ascertained, but the text as it stands forms an intelligible whole. It is a law concerning the collection of taxes, and penalties for improper performance in the process of collection are attached to the latter portion of the

This law clearly does not mention the striking of solidi at 1/84th of a Roman pound. It simply insists that mine operators in the fulfillment of their leases should continue an older practice of remitting to the Treasury fourteen ounces of gold for each pound. This law was inserted into the chapter because it formed part of a longer law which in another section established the fact that in payments made in gold bullion a pound was to be valued at seventy-two solidi. Since such a regulation would have meant that the treasury would lose money on its gold leases, a specific exception was made in the case

law. The first part of the law gives the weight of the solidus as four scruples, i.e., the exact theoretical weight of the normal solidus, but it then goes on to say that if anyone, presumably a taxpayer, should wish to weigh out solidi, he should weigh out seven solidi for one ounce and fourteen solidi for two ounces. The latter portion of this first fragment of the law therefore contradicts the given weight of the solidus. Mommsen, *Histoire de la monnaie romaine*, trans. Duc de Blacas, III, pp. 64–5, says that the law of Valentinian (*C. Th.*, XII, 6, 13) which specified that there were seventy-two solidi to the pound was a restatement of the Constantinian law of 325 A.D. It was therefore necessary to emend the reading of the Constantinian law. Since the law of 325 A.D. occurs in only one manuscript, and that one is of Frankish origin, Mommsen supposed that the VII and XIV were inserted to accord with the Frankish system of coinage in place of VI and XII. The fact that the solidus was still quoted at four scruples, he maintained, was the typical scribal error. Mommsen, "Fränkische Interpolation im Theodosischen Codex," *Jahrbuch des gemeinen deutschen Rechts*, III (1860), pp. 454–456, reprinted in *Gesammelte Schriften*, II, pp. 408–409; "Zu Cod. Theod., 12, 7, 1," *Jahrbuch des gemeinen deutschen Rechts*, V (1862), pp. 129–131, reprinted in *Gesammelte Schriften*, II, pp. 410–411; "Das theodosische Gesetzbuch," *Zeitschrift der Savigny-Stiftung für Rechtsgeschichte*, röm. Abt., XII (1900), p. 157, reprinted in *Gesammelte Schriften*, II, p. 378. Cf. G. Hänel, "Einige Bedenken den Aufsatz (*sic*): fränkische Interpolation im Theodosischen Codex (Bd. III, Ur. 21 des Jahrh.) betr.," *Jahrbuch des gemeinen deutschen Rechts*, IV (1861), pp. 309–316. Hänel wrongly thought that solidi of 1/84th of a pound might have been struck in the fourth century. He was also wrong in attributing the manuscript to Italy. See E. A. Lowe, *Codices Latini Antiquiores. A Palaeographical Guide to Latin Manuscripts prior to the Ninth Century* (Oxford: Clarendon Press, 1950), V, p. 21. Pinder and Friedlaender, *Beiträge zur älteren Münzkunde* (Berlin, 1851), I, p. 15, simply corrected the text without explaining how such an emendation was possible. Also see A. Soetbeer, *op. cit.*, pp. 292–296. O. Seeck, "Die Münzpolitik Diocletians und seiner Nachfolger," *Zeitschrift für Numismatik*, XVII (1890), pp. 55–56, says that there was a special pound of eighty-four solidi used by the Fiscus in the collection of taxes as shown by *C. Th.*, XII, 7, 1 (325 A.D.) which was suppressed by the edict of Valentinian (*C. Th.*, XII, 6, 13). Also see Josef Wilhelm Kubitschek, "Beiträge zur frühbyzantinischen Numismatik," *Numismatische Zeitschrift*, XXIX (1897), pp. 177–178.

of the mine operators. In the fulfilling of mine leases a heavy pound of fourteen ounces was to be used as in the past, but in all other cases seventy-two solidi were to be accepted as equivalent to a full pound of gold.

The acceptance of such a heavy fourteen ounce pound, of course, requires somewhat more proof than has just been set forth, and we must therefore diverge slightly from the central theme of this chapter. A situation in which two pounds of different weights, both recognized legally, existed need excite no surprise, but great care must be taken in citing passages in this connection to distinguish the second variety of pound (i.e. that of fourteen ounces) from the mere use of heavy weights. This latter practice was common in the early mediaeval period, and there was a good deal of legislation against it.²³ Some passages are capable of an even wider interpretation. On the estates of the Church in 591 A.D., it would appear as if $73\frac{1}{2}$ solidi were exacted for a pound, but that Gregory the Great considered this sinful and ordered that the rustics pay only a pound of seventy-two. In doing this, however, he states, "and there ought to be exacted neither any farthings (siliquae) beyond the pound, not a *greater* pound, nor charges above the *greater* pound, but each according to your assessment there should be an increase of the rent in proportion as the resources suffice, and so a shameful exaction may never be made."²⁴

²³ There is no point to be made by citing the mass of these laws. They would of necessity include such texts as Chapter XIX of the *Constitutio Pragmatica* (XIX. De Mensuris et Ponderibus: *Ut autem nulla fraudis vel laesionis provinciarum nascatur occasio, iubemus in illis mensuris vel ponderibus species vel pecunias dari vel suscipi, quae beatissimo Papae vel amplissimo Senatui nostri Pietas in praesenti contradidit.*) That improper weights were common can be shown from still other passages. "*Exigentes vero assem publicum per gravamina ponderum premere dicuntur patrimonia possessorum, ut non tam exactio quam praeda esse videatur. Sed ut totius fraudis abrogetur occasio, ad libram cubiculi nostri quae vobis in praesentia data est, universas functiones publicas iubemus inferre.*" Cassiodorus, *Variarum*, V, 39 (MGH., AA., XII, p. 156) written in the period 523–526 A.D. Cf. Mommsen, "Ostgothische Studien," *Neues Archiv*, XIV, p. 464, note 2. Also see Cassiodorus, *Variarum*, XI, 16 (MGH., AA., XII, p. 344), which is an answer to the Ligurians who have complained concerning unjust weights and measures used by tax collectors. Gregory I, *Registrum*, I, 42 (MGH., *Epistolae*, I, p. 64), orders unjust weights to be broken and to be replaced by just weights.

²⁴ The italics are mine. Translated by William E. Lunt, *Papal Revenues in the*

It is clear that the pound was not eternally the same weight, and just as we may speak of the pound Troy or the pound avoirdupois but in common parlance understand one pound to be meant, so it must have been among the Romans. A gift of 1,600 pounds of gold for the *Decennalia* of the emperor was voted by the Senate in 385 A.D., and that it was to be paid in the urban standard, i.e. a different one from the normal one, is carefully stipulated.²⁵

Middle Ages (New York: Columbia University Press, 1934), II, p. 4. The text of this portion of Gregory I, *Registrum*, I, 42 (MGH., *Epistolae*, I, pp. 62–63) is important. "*Cognovimus etiam, in aliquibus massis ecclesiae exactionem valde iniustissimam fieri, ita ut libram septuagenum ternum semis quod dici nefas est exigantur et adhuc neque hoc sufficit, sed insuper aliquid ex usu iam multorum annorum exigi dicuntur. Quam rem omnimodo detestamur et amputari de patrimonio funditus volumus. Sed tua experientia sive in hoc quod per libram amplius, sive in aliis minutis oneribus et quod ultra rationis aequitatem a rusticis accipitur, pensent et omnia in summam pensionis redigat, ut prout vires rusticorum portant pensionem integram et pensantem libram septuagenum vinum (binum corrigit Mommsen, "Decret des Commodus für den Saltus Burunitanus," *Hermes*, XV (1880), adn. 2) persolvant, et neque siliquas extra libras, neque libram maiorem neque onera supra libram maiorem exigi debeant, sed per estimationem tuam prout virtus sufficit in summam pensionis crescat et sic turpis exactio nequaquam fiat. . . .*" Mommsen, *loc. cit.*, views the additional 1 ½ solidi mentioned as "*der Zuschlag der Hebegebühr zum Steuerquantum.*" The passage, however, speaks of a greater pound (73 ½ solidi?) and additional charges. B. Hilliger, "Die Siebenteilige Unze der Römer," *Blätter für Münzfreunde*, LXII (1937), pp. 129–131, connects this passage with an ounce divided into seven parts because he believed that the 73 ½ solidi represented a pound of 1764 siliquae which would be evenly divisible by twelve and by seven. He applies this to the light Frankish solidi.

²⁵ Symmachus, *Relationes*, XIII (MGH., *AA.*, VI, p. 290): "*Nunc in amorem tuum studia nostra creverunt. Nam mille sescentes auri libra decennialibus imperii tui festus devotus ordo promisit urbanis ponderibus conferendas, id est trutinæ largioris examine.*" Cf. the *Acta* of the pseudo-council of Sinuessa which speak of a *libra occidua* which may be either a "western pound" or a reference to the sign of the zodiac known as *libra*. The *libra occidua*, however, is given certain numerical values in the *Acta*, but unfortunately the values given in different parts of the text do not coincide with one another. At one point the *libra occidua* seems to be equivalent to eighty-four, and at another to seventy-two, and in the third instance to less than forty-four and so forth. The text is found in ed. Mansi, *Amplissima collectio concillorum*, I, cols. 1255ff. The notes of Severinus Binius, a sixteenth century editor of the *Acta* of the Church councils, who agrees with C. Baronius (*Annalium ecclesiasticorum* (Antwerp, 1670–7), II, pp. 724–5, anno 302, no. 91–95) in connecting the *libra occidua* with the normal pound of seventy-two solidi and distinguishing it from an eastern pound of eighty-four solidi, are also found in Mansi, *ad loc.* The *Acta* of this council were forged in the early sixth century. E. Caspar, *Geschichte des Papsttums von den*

Monneret De Villard, on the basis of the passages which have been discussed, wrongly concluded that he had demonstrated, both from the texts and the coins themselves, that different solidi struck on three different standards were in use in the Byzantine Empire during the sixth and seventh centuries. There was the normal solidus of twenty-four siliquae or $1/72$ nd of a pound, a lighter solidus of twenty-one siliquae or approximately $1/84$ th of a pound, and the lightest solidus of twenty siliquae or approximately $1/86$ th of a pound.²⁶ He even went so far as to suggest that there might be still other solidi of different standards and that the study of Greek papyri from Egypt revealed the existence of a number of different solidi. The very apparent difficulties that would have arisen in the economic life of the empire as a result of such a virtually haphazard system of coinage were ignored by Monneret De Villard. Of course, it is now clear as a result of the work of Johnson and West that the calculations in the Egyptian papyri do not support the existence of solidi struck on different standards, but that they make use of a system of accounting which is now comprehensible.²⁷

In evaluating the work done by Monneret De Villard one might, as a result of the rather loose use of texts, easily overlook the significance of the fact that his was the first attempt at establishing the true limits of the problem and applying historical data to it. A substantial catalogue of the light weight solidi had been prepared, and the problem of explaining and interpreting the significance of their existence was now clear to all. The years immediately following witnessed a growth in interest in these strange coins, and even the famed Professor Regling spoke of doing some work on them.²⁸ Unfortunately Regling never did manage to produce the article or book, but it was a clear sign of growing interest. Hoards of these pieces and individual coins

Anfängen bis zur Höhe der Weltherrschaft (Tübingen, 1933), I, p. 98. Also see L. Duchesne, *Liber Pontificalis; Texte, Introduction et Commentaire* (Paris, 1886), I, Introd., pp. lxxiff.

²⁶ Solidi struck at twenty siliquae are actually $1/86.4$ th of a Roman pound. The eighty-sixth part of a Roman pound equals 20.093 siliquae.

²⁷ Louis C. West and Allen Chester Johnson, *Currency in Roman and Byzantine Egypt* (Princeton: Princeton University Press, 1944).

²⁸ R. Münsterberg, "Spätrömische Inedita," *Mitteilungen der Numismatischen Gesellschaft in Wien*, XV, nos. 57-58 (1923), pp. 227-228.

from stray finds began to appear with some frequency. The entire subject of the quantity of gold in circulation and its movements came under scholarly survey in 1933 when Professor Marc Bloch wrote a stimulating article on the problem of gold in the Middle Ages.²⁹

In 1937 another study devoted to these light weight solidi appeared in which the author, Friedrich Stefan, put forth a new interpretation.³⁰ A hoard of coins was found at Hoischhügel (Maglern-Thörl) which contained one solidus of Justin II which weighed only 4.07 grammes, and was therefore apparently only equivalent to twenty-one siliquae instead of the more normal twenty-four. This coin bore in the reverse exergue the mark COX+X which Stefan interpreted as meaning twenty siliquae (XX) plus one siliqua (I). The CO he expanded as Constantinople.³¹

The existence of this singular piece in a hoard that he was studying led Stefan to survey the entire problem. He proceeded to collect the locations of the known finds of these light weight solidi, and from that data he concluded that all of these solidi fell into two groups. Firstly, there were those coins which had been found, according to Stefan, in southern France and in Italy, and, on the other hand, there were those coins which were found in the Balkan peninsula and southern Russia. Unfortunately Stefan did not publish a list of the find spots upon which this conclusion was based, but he indicated very clearly that he believed that there was such a series of finds in southeastern France.³² Intensive and determined research has failed to yield any

²⁹ Marc Bloch, "Le Problème de l'or au moyen âge," *Annales d'histoire économique et sociale*, V (1933), pp. 8–9, deals specifically with this early period. Professor Bloch, however, did not treat this Byzantine series of solidi, but rather he devoted his article to a broad synthesis.

³⁰ Friedrich Stefan, "Der Münzfund von Maglern-Thörl (vergraben um 570/71 bis 584/85) und die Frage der reduzierten Solidi," *Numismatische Zeitschrift*, LXX (1937), pp. 43–63.

³¹ This is Coin no. 73 in our catalogue.

³² Friedrich Stefan, "Der Münzfund von Maglern-Thörl (vergraben um 570/71 bis 584/85) und die Frage der reduzierten Solidi," *Numismatische Zeitschrift*, LXX (1937), pp. 52–53. On page 53 he says, "*Luschin selbst aber zitiert bereits zwei solidi zu 20 Siliquen (3.68 g. und 3.64 g.) des Kaisers Justinian I., und aus südostgallischen Funden konnte ich eine Reihe ähnlicher Typen desselben Herrschers feststellen, die alle Nachahmungen seiner Exarchatsprägungen von Ravenna und Rom aus der Zeit 555/565 waren und Gewichte von nur 3.718 g. bis 4.17 g. aufwiesen.*"

of the finds of light weight solidi of clearly imperial origin from southern France. No support can therefore be found for the basis of Stefan's contention.

Nevertheless Stefan believed, on the basis of his examination of the extant material, that all of the coins which might have been included in the western group were imitations of the solidi of Ravenna which had been struck in the reigns of Justinian I, Justin II, Maurice Tiberius, Phocas, and Heraclius. He maintained that they showed the characteristic stylistic marks of Ravenna and that the lightness of the coins was usually indicated by either a sloping cross (X) or a standing cross (+) in the reverse exergue. Many of them he thought could be identified by their thinness or the smaller module or smaller portraiture. The exergual marks on these coins would be COX+X or CONX+X or OBXX or rarely BOXX, and in some cases they were unmarked. The COX+X and CONX+X pieces he thought were of twenty-one siliquae and weighed about 3.78 grammes. He did not distinguish any of the solidi as being barbarian imitations, and it therefore seems likely that he never examined the coins themselves. Many of them, particularly those marked COX+X and CONX+X, are clearly of barbaric origin. Stefan, however, as has been said, merely ignored this feature and pointed out the fact that solidi of twenty siliquae issued in the names of Justinian, Justin II, Maurice Tiberius, etc., were known from Gaul, and that there was even a series of royal Frankish solidi which bore the mark XX to indicate a value of twenty siliquae. The hoard of Wieuwerd, which contained two light weight solidi of imperial origin, he contended showed that such light weight solidi circulated in the lands west of the Rhine while the fact that the use of these coins spread across the Rhine to the other Germanic tribes could be shown from the find of a barbaric imitation of a light weight solidus marked X+X and struck in the name of Justin II which was found in Grave no. 1 at Munningen in Bayrisch-Schwaben.³³ He admitted, however, that he could not determine whether or not the southern Gallic mints were the source of all so-called western type solidi of the light weight series.

Turning his attention to the series which he had denominated as eastern in origin, Stefan said that though this latter series showed

³³ These hoards and finds are discussed in detail in Chapter three.

great similarity to the western coins they were more characteristic of the Constantinopolitan productions. The typical marks of the coinage of the Exarchate of Ravenna were lacking on this eastern series. It was also a more extended series in that it began with Justinian and extended through the reigns of Justin II, Tiberius Constantine, Maurice Tiberius, Phocas, Heraclius as sole ruler as well as in his joint reign with his son Heraclius Constantine, and so on through the reigns of Constans II and Constantine IV Pogonatus. Another point of distinction between the two series lay in the fact that all of the coins of eastern origin bore marks of value in the exergue on the reverse while some of those in the West did not. Those in the East of twenty-one siliquae of the period from Justin II through the reign of Phocas were marked *+* or +* (*-* or -*).³⁴ The pieces of this eastern series which Stefan thought were of twenty siliquae occurred only for the reigns from Heraclius through that of Constantine IV Pogonatus and bore marks similar to those found in the West, i.e. OBXX, BOXX, or BOГK. The most numerous group of coins of the light weight type was that composed of those pieces of supposedly Constantinopolitan fabric of twenty siliquae with the marks of value OBXX and BOXX which were struck in the names of Heraclius and Heraclius Constantine. Stefan maintained that these coins, since they showed the head of Heraclius Constantine in smaller size than that of Heraclius, could be distinguished from the Ravennese series which showed both heads in approximately the same proportions. Monneret De Villard had listed nineteen such pieces while twenty-seven solidi of the three emperor type of Heraclius had been found in the hoard of Pereschtschepino in 1912, and in that of Novo Sandsherovo or Zatschepilovo, found in 1928, seven more had been recovered. Both places were in the district of Poltawa in southern Russia.

N. Bauer in presenting the material from these finds in 1931 had suggested that perhaps the coins had been struck in a mint in southern Russia on the northern coast of the Black Sea.³⁵ He was, however, very cautious in proposing this and made certain to

³⁴ This last series of marks, *-* and -*, is probably derived from the work of Monneret De Villard. No coins bearing such markings have come to light.

³⁵ N. Bauer, "Zur byzantinischen Münzkunde des VII. Jahrhunderts," *Frankfurter Münzzeitung*, II, no. 15 (March 1931), pp. 227-229.

indicate that it was based solely on the location of these hoards and one other from the Dnieper Delta and not on a stylistic study of coins from other collections. Stefan went somewhat further and contended that since the solidi of the eastern series which he had classified were struck in imitation of coins of Constantinopolitan manufacture, they must have been issued at a site which was clearly under the influence of the capital. Two finds from the Balkan peninsula were used to support his view. The Sadowetz hoard in the district of Plevna had yielded a coin of Justin II of twenty-one siliquae which, in addition to the eastern mark $\text{OB}^{*}+^{*}$ in the exergue, bore the letters ΘS at the end of the reverse legend while another similar coin which was marked $\text{CO}^{*}+^{*}$ had appeared in another find from an uncertain location in the Balkans. Tolstoi had described still another solidus of the same variety as the last in his catalogue. Stefan put forth the hypothesis that the S at the end of the reverse legend stood for the sixth *officina* and that the Θ was the mark of the mint of Thessalonica. This suggestion was not a wholly original one, for it was discussed by several compilers of earlier catalogues.³⁶ Since the *theta* was seen to occur only on those coins which Stefan recognized as of eastern origin and those same pieces supposedly showed strong signs of Constantinopolitan influence, Stefan felt that his conclusion that Thessalonica was one of the sources of the coins of the so-called eastern series was assured. In the course of a later discussion of these pieces it will be demonstrated that this is in error and that these pieces were actually struck in Antioch.

Just as the coins of the western series were carried through the channels of commerce, those of eastern origin, according to Stefan, found their way into Germany and were used as money or as pieces of jewellery and were even subject to imitation. In support of this he listed evidence from funerary deposits collected by Joachim Werner from Mullingsen in the district of Soest, from Wonsheim in the district of Alzey, from Sinzig in the district of Ahrweiler, and from Pfahlheim near Ellwagen.³⁷ In all of these instances pieces of twenty

³⁶ The history of the controversy regarding the significance of the letters ΘS is traced in Chapter three. It now seems certain that it refers to the mint of Antioch.

³⁷ Joachim Werner, *Münzdatierte austrasische Grabfunde* (Berlin and Leipzig, 1935), *passim*, in ed. Hans Zeiss, *Germanische Denkmäler der Völkerwanderungs-*

siliquae marked OBXX or BOXX struck in the names of Heraclius and Heraclius Constantine were found. Finally, Stefan viewed a piece of barbarian origin from an Alemannic grave with the mark XVOX in the reverse exergue as an imitation of these light weight solidi of Heraclius and Heraclius Constantine.³⁸

As a result of Luschin von Ebengreuth's study of the light weight Frankish solidi it was clear that the Byzantine light weight gold pieces were in circulation in the West by 582 A.D. By referring to two passages from the *Anecdota* of Procopius in which that author speaks of the lowering of the value of the gold coins by Justinian,³⁹ Stefan concluded that the Emperor struck his newer gold pieces appreciably lighter as a measure to bolster his fading finances. These two passages, as well as the coins themselves, sufficed to prove to Stefan's satisfaction that the issuance of light weight solidi went back at least as far as 565 A.D., the date of Justinian's death. In this matter of dating, however, he was not exacting enough. A closer date for the start of this series of light weight solidi can be established, if they are to be connected with the passages from the *Anecdota*. Certainly the fact that all of the light weight solidi are of the full-face portraiture is a clear indication of a *terminus post quem* of 539 A.D., the twelfth year of the reign of Justinian, which the dated bronzes indicate as the start of that style of portraiture. But even greater accuracy is possible. Had Stefan been more careful he would have noted that one of the passages from Procopius connects the monetary change with the period during which Peter Barsymes was in office as *Comes Sacrarum Largitionum* after he had recovered the favor of the Emperor Justinian, and that as a result the first issue must have occurred at some time between 547 A.D. and June 1, 555 A.D.⁴⁰

zeit, III, issued by the Römisch-Germanische Kommission des Archäologischen Instituts des Deutschen Reiches.

³⁸ Adolph E. Cahn, *Versteigerungs-Katalog 75. Antike Münzen. Griechische Münzen aus ausländischem und norddeutschem Besitz. Das fürstlich fürstenerbergische Münzkabinett zu Donaueschingen*, lot 1847. This sale was held May 30, 1932. Stefan gives the weight of this piece as 4.002 grammes.

³⁹ Procopius, *Anecdota*, XXII, 38; XXV, 12.

⁴⁰ Ernest Stein, *Histoire du Bas-Empire* (Paris-Bruxelles-Amsterdam: Desclée de Brouwer, 1949), II, p. 766. Cf. *Ibid.*, p. 762; Pauly-Wissowa, *Real-Encyclopädie der classischen Altertumswissenschaft*, XIX, s.v. *Petrus 31*. Peter Barsymes was Count of the Sacred Largesses for the first time from about 540–543 A.D.

The detailed explanation for the existence of these solidi proposed by Stefan was a simple one. The emperors of the sixth and early seventh centuries paid large sums of money to the Avars to secure peace.⁴¹ Stefan believed that the fact that the majority of the light weight solidi found in the Balkans, Hungary and South Russia might be seen to have been struck during the reigns of Heraclius and his successor added strength to his general thesis that this light weight coinage formed a part of the enormous tribute payments to the Avars. The emperors, he contended, had mixed the light weight coins in a given percentage with the solidi of full weight in these payments. He also pointed out as further proof of his hypothesis that the eastern series of coins which he had constructed came to an end during the reign of Constantine IV Pogonatus. Thus they covered almost exactly the period during which large scale tribute payments were made to the Avars. This coincidence of the period of issue of light weight solidi with the time of the tribute payments to the barbarians of the Hungarian plain, he maintained, confirmed his hypothesis that the light weight solidi were mixed with the mass of good coinage which was used for these subsidies, and they were thus passed along to the barbarians with a resultant saving for the Byzantine government. As an instance that the practice of issuing poorer currency with better coinage was not unknown to Roman governments of an even earlier period, he cited the so-called *nummi subaerati*. These *nummi subaerati* are sometimes found to be as much as two-thirds of the total content of hoards of an earlier period, and Stefan believed that they were issued by the Roman government in an attempt to avoid the economic consequences which would have resulted from a general depreciation of the currency.⁴²

By July 16, 543 he had been raised to *Praefectus Praetorio per Orientem*. Sometime in 546 he was dismissed in disgrace, but he was shortly restored as Count of the Sacred Largesses, and by June 1, 555 A.D. he was again Praetorian Prefect according to *Just. Nov.*, 159. Also see Charles Diehl, *Justinien et la civilisation byzantine au VI^e siècle* (Paris, 1901), pp. 109f.

⁴¹ Stefan gives a reference to Theophanes, *Chronographia* (Bonn edition, p. 451), to show that this tribute was customarily 100,000 solidi and that Heraclius doubled that amount. Unfortunately Theophanes nowhere says this. The tribute payments to the Avars, however, were real and were unquestionably very large.

⁴² Friedrich Stefan, *Münzkunde des Altertums* (Graz, 1932), pp. 20-21.

Stefan concluded his argument by pointing out that the western finds of these light weight solidi were largely restricted to the coins of Heraclius and his son Heraclius Constantine. The hoards of France and Italy supposedly showed only these coins. The reason, according to Stefan, was a simple one. These coins arrived in the West via the commercial transactions of the western peoples with the Avars through the Lombards. It was therefore not surprising to Stefan that the hoard of Hoischhügel showed none of the coins of the eastern series which he had collected but only a single piece of what he had denominated as the western type. The coins of the western type were clearly in circulation among the Lombards prior to the inauguration of their own coinage. The light weight solidi had supposedly travelled through the channels of commerce from southern France into Italy as shown by the Lombard graves at Udine and Cividale. Coin no. 2 of the Catalogue of this monograph was found in a Lombard grave at Udine, and Coin no. 74 was found in still another Lombard grave at Cividale.

The basic argument put forth by Stefan has now been traced in some detail through the chain of reasoning set forth by that author. His was really the first serious attempt at understanding the significance of these solidi in connection with the history of the period during which they were issued. There are, however, several weak spots in the chain, and some serious reservations must be made with regard to this thesis. Several of these weak links have been indicated in the course of the exposition of Stefan's thesis, but a more complete critique is certainly warranted by the fact that Stefan's article is so often cited. The stylistic differences which Stefan speaks about in distinguishing the eastern from the western solidi are by no means as obvious and certain in the case of light weight solidi as he seems to indicate.⁴³ The western series erected by Stefan is largely composed

⁴³ In describing the solidus of Justin II from the hoard he was discussing he wrote, "*Der Maglerner Solidus Justinus II. (565-578) (Abb. 5) gehört, seinem Stil und seinem Charakter nach, zu den untergewichtigen Soliditypen westlicher Fabrik und Mache, wie sie durch die in Südfrankreich und Italien vorkommenden Fundstücke gekennzeichnet sind. Der beiderseitige scharf ausgeprägte Wulstreif, die charakteristische, ziemlich roh stilisierte, durch wenige markante Linien erfolgte Wiedergabe des kaiserlichen Brustbildes auf der Vorderseite und die gleich eigentümliche Darstellung der von vorn sitzenden Constantinopolis mit Kreuzkugel und Speer auf der Rückseite entsprechen vollkommen den ravennatischen Merk-*

of solidi which can be shown to be of barbaric origin. That some of the light weight solidi were struck in the West and others in the East is clear enough in itself from a stylistic examination of the coins themselves, but unfortunately the division of these coins into these two groups is not exactly that which Stefan proposes. The inclusion of the barbaric pieces in the western series without any clear distinction necessitates a complete restudy of this aspect of the problem. The barbaric quality of most of the pieces in Stefan's classification will be demonstrated in the next chapter.

It is in connection with the treatment accorded to the hoards and finds, however, that the most serious doubts must be retained, and this is the main prop for Stefan's hypothesis. He speaks of hoards containing such light weight solidi from Hungary, southern France and Italy. Unfortunately he cites no evidence to substantiate this claim for the existence of hoards of authentic light weight Byzantine solidi in those places, nor can they be found listed in the hoard catalogue compiled by Mosser.⁴⁴ In southern France no trace of them can be found in the secondary literature, while in Italy only the two coins from the Lombard necropoles of Udine and Cividale are noted. The crux of the situation, however, lies in Hungary, and in this case two recent studies of the finds of that region give a clear account of the picture. L. Huszár has prepared a study of the finds from the middle Danube region, and D. Csallány reviewed the evidence of the coin finds for a survey of the circulation of Byzantine currency among the Avars.⁴⁵ Only a single light weight solidus of these series noted

malen der gleichzeitigen Exarchatsprägungen Justinus II. (Abb. 21)." Friedrich Stefan, "Der Münzfund von Maglern-Thörl (vergraben um 570/71 bis 584/85 und die Frage der reduzierten Solidi," *Numismatische Zeitschrift*, LXX (1937), p. 56.

⁴⁴ Sawyer McA. Mosser, *A Bibliography of Byzantine Coin Hoards*, NNM 67 (New York: The American Numismatic Society, 1935). The information given in the published accounts cited there does not permit certainty on this matter, but there is less reason to presume the existence of rare pieces in these hoards rather than their absence. Since the article by Stefan was written two years after the publication of this bibliography there is, of course, the possibility that such coins were discovered in the intervening period or were missed by the compiler, but Stefan gives no additional information beyond the bald statement of the existence of such hoards, and research has failed to yield any positive support for his statement.

⁴⁵ L. Huszár, "Das Münzmaterial in den Funden der Völkerwanderungszeit im mittleren Donaubecken," *Acta Archaeologica Academiae Scientiarum*

by Stefan dating from the reigns of Heraclius and Heraclius Constantine, that from Szentes, is reported to have been found in the area. The existence of coins of this type in the Budapest Museum cannot be taken as overly significant in view of this fact and the extreme mobility of these little bits of metal in the hands of coin dealers. It is a fact well attested by the number of hoards and finds recorded by Csallány that the great period of influx of Byzantine coins into the Avar kingdom was just the same as the time span covered by the light weight solidi issues, i.e., from the reign of Justinian through that of Constantine IV Pogonatus. In the eighth and ninth centuries Byzantine currency is not found in any appreciable quantity

Hungaricae, V (1955), pp. 61–109. D. Csallány, "Byzantine Money in Avar Finds," *Acta Archaeologica Academiae Scientiarum Hungaricae*, II (1952), pp. 235–244 (in Russian). There is a French summary of this work entitled "L'importance de la circulation monétaire byzantine pour les legs archéologique des Avars," published on pages 245–255 of the same journal. On the coin from Szentes, which is cited by both of these authors, see Chapter three of this monograph. Csallány notes that during the fifth to the seventh centuries Byzantine artifacts are found in the same region and that they disappear at the same time as the coins and only reappear, as do the Byzantine coins, during the time of the Magyar conquest. The Byzantines had active commercial relations with the Avars, as shown by the finds, at least as late as the year 668/70, and in the year 676/7 there was still direct contact between these peoples as shown by the Avar embassy which visited Constantinople at that time. Since no coins of Justinian Rhinotmetus were, however, found in the area, the break must have come between 677 and 685. No coins of Constantine IV Pogonatus that can be dated later than 681 have been found either, so that the period in question can be narrowed to the years 678–681. Csallány suggests that the event which caused the sharp break in Byzantine-Avar relations was the Bulgarian invasion of 679 which created a barrier along the lower Danube. An interesting analogy can be made for the belief that the rise of the Avar kingdom itself during the middle years of the sixth century resulted in the sharp break in the Scandinavian trade of the Byzantines at the same time as shown by the hoards from southern Scandinavia. Joachim Werner, "Zu den auf Öland und Gotland gefundenen byzantinischen Goldmünzen," *Fornvännen*, XLIV (1949), pp. 257–286, and esp. pp. 275–283, suggests that the rise of the Avar state cut the Vistula trade route. Dirk Jellema, "Frisian Trade in the Dark Ages," *Speculum*, XXX (1955), p. 21 recapitulates the various theories regarding these finds in Scandinavia and gives the latest bibliographical information. C. Moisil, "Sur les monnaies byzantines trouvées en Roumanie," *Bulletin de la Section Historique, Académie Roumaine*, XI (1924), pp. 207–211, and esp. pp. 209–210, shows that the coin finds from Roumania also commence in significant quantity with deposits dating from the reign of Justinian and that these finds begin to disappear in the second half of the seventh century.

within the borders of the Avar kingdom. The high point of the penetration or introduction of Byzantine coins into that area was attained during the reigns of Heraclius and Heraclius Constantine. The defeat of the Avaro-Slavonic army before Constantinople in 626 A.D., however, really weakened the Avar kingdom, and its importance declined steadily until its final extinction by the Carolingians.

That Byzantine coins continued to enter the region in some numbers as late as the reign of Constantine IV Pogonatus (668–685 A.D.) and ceased to do so afterwards is a surprising fact for which no completely satisfactory explanation has yet been proposed. Still this coincidence in time between the introduction of Byzantine coins into the Hungarian plain and the striking of light weight solidi cannot be used to indicate that the light weight solidi were part of the tribute payments. The virtual absence of such light weight solidi from that region militates most strongly against such a hypothesis particularly when one remembers that the concentration of Byzantine coins entering the entire central and western half of the European continent fell off rather sharply at approximately the same time.

Still another point must be made in connection with this basic feature of Stefan's hypothesis. If the premise is accepted that these coins were used as a part of the tribute payments to the Avars, but their absence from sites on the Hungarian plain is to be accounted for by the fact that they circulated freely in trade, then there can be no doubt that numbers of them would be found in the region of Thessalonica and other Byzantine emporia which were involved in the Avar and Slavonic trade of the middle Danubian basin. The Avars must have made a great number, if not almost all, of their foreign purchases from Roman traders in exactly the same way that other barbarians did.⁴⁶ If these things were true, however, the Avars would have very quickly become aware of the fraud that had been practiced upon

⁴⁶ Cf. Cosmas Indicopleustes, II (Migne, *Patrologia Graeca*, LXXXVIII, col. 1116; ed. Winstedt (Cambridge, 1909), p. 81). See the translation by MacCrindle, *The Christian Topography of Cosmas, An Egyptian Monk*, issued by the Hakluyt Society (London, 1897), XCVIII, p. 73. "There is yet another sign of the power which God has accorded to the Romans. I refer to the fact that it is with their coinage all nations carry on their trade from one extremity of the earth to the other. This money is regarded with admiration by all men to whatever kingdom they belong, since there is no other country in which the

them. The Roman merchants could only have accepted this clearly marked light weight gold at a discount. There is clear evidence indicating that the use of such light weight solidi was proscribed within the boundaries of the Byzantine Empire, and the passages leading to such a conclusion with respect to the light weight gold coinage of Gaul have already been cited in connection with the work done by Monneret De Villard. The hoards and finds support that conclusion, as will be shown in chapter three. It can hardly be seriously maintained that the Romans issued light weight solidi which were clearly marked and sent them to the Avar khan as part of their subsidy agreement, but that the use of a part of the coinage so dis-

like of it exists." Cosmas tells us also that only the best gold coins were used in foreign commerce. It is, of course, well known that Cosmas is most accurate with respect to the eastern trade of the Empire, but merchants are likely to have been equally careful in the western trade. E. A. Thompson, *A History of Attila and His Huns* (Oxford: Clarendon Press, 1948), pp. 171 ff., suggested that the Huns secured many of the necessities of life by purchase from the Romans. Also see Archibald R. Lewis, *Naval Power and Trade in the Mediterranean, 500-1100 A.D.* (Princeton: Princeton University Press, 1951), pp. 37 ff. Lewis expands this thesis into the general proposition that much of the gold paid out in subsidies returned via commercial transactions. A law of 374 (?) A.D. not only prohibits the supplying of gold to the barbarians in the course of trade, but it even states that if any is found among them, subtle skill is to be used to bring it away. Merchants who traffic in gold among the barbarians are to be subject not only to fines but also to capital punishment. *C. Just.*, IV, 63, 2 (ed. Krueger, *Corpus Iuris Civilis*, II, p. 188). This worry on the part of the Romans regarding the loss of monetary metals is reflected in many passages. Thus Julian the Apostate condemns the men who for private gain have taught the princes to buy peace from the barbarians with gold. *Amm. Marc.*, XXIV, 3, 4-5 (ed. Teubner, II, p. 10). Justinian in the sixth century followed the same policy and refused permission to the grandmother of John the son of Basilus to ransom him from Chosroes for 2,000 pounds of silver because he did not wish Roman wealth to be transferred to the enemy. Procopius, *Anecdota*, XII, 8 (ed. Teubner, III, pt. I, p. 78). Justinian even negotiated with the various peoples north and south of the Persian Empire to secure routes to the East not only to ensure continued access to eastern luxuries during the period of strife with Persia but also to prevent the Persians from making a profit on Roman trade. J. B. Bury, *A History of the Later Roman Empire from the Death of Theodosius I to the Death of Justinian (A.D. 395 to A.D. 565)* (London, 1931), I, p. 331; A. D. Vasiliev, *History of the Byzantine Empire* (Madison, 1928), I, pp. 199-200. These references could be greatly multiplied to deal with the entire problem of the so-called gold shortage within the Roman Empire, but the point has already been made that a large percentage of the gold paid out must have returned to the Empire.

patched and clearly marked at the mint was proscribed within the borders of the Byzantine Empire. How can one use such a theory to explain the chain of finds extending all along the northern boundary areas of the empire? Any interpretation of these light weight solidi must serve to explain them within the general framework of history. On this last point the theory proposed by Stefan is not satisfying. The first of these light weight solidi were issued in the reign of Justinian, probably within the period 547–555 A.D. A glance at the Catalogue will reveal that a respectable number of such light weight solidi and barbaric imitations of them were struck during the reign of Justinian. The Avars, however, can only be said to have achieved real prominence after the death of Justinian. The most important period of tribute payments to the Avars was the latter half of the sixth century and the first quarter of the seventh century. The initiation of the light weight solidi cannot have been directly connected with the payments to the Slavs and Avars which largely follow the death of Justinian. For all these reasons, which might be expanded to greater length, the hypothesis put forward by Stefan must be categorically rejected.

In 1941, however, still another very ingenious suggestion was put forth by a numismatist of note. Goodacre, on the basis of his study of a unique solidus of this series containing two imperial busts (Coin no. 79), put forth the view that these light weight solidi were issued at the mint of Thessalonica so as to accord with the peculiar bronze monetary system which was used in that city during the reign of Justinian.⁴⁷ The evidence concerning the meaning of the mint mark ΘΣ, however, will be shown to yield a different conclusion. The unusual bronze denominations found at the mint of Kherson during the reign of Justinian were found to be in conformity with the normal Byzantine monetary system.⁴⁸ Suggestions have been put

⁴⁷ Hugh Goodacre, "Justinian and Constantine," *Numismatic Chronicle*, Series 6, I (1941), pp. 48–53. Also see Charles Oman, "A Gold Solidus of A.D. 578: A Reattribution," *Numismatic Chronicle*, Series 6, II (1942), pp. 104–105. Oman proves that the coin in question was issued during the short period of the joint reign of Justin II and Tiberius Constantine (Sept. 26, 578–Nov. 14, 578 A.D.). See the Catalogue for a full description of the piece and the pertinent literature.

⁴⁸ A. de Longpérier, "La Πεντανούμμιον Byzantin," *Revue numismatique*, nouvelle série, XIV (1869–70), p. 268. Also see E. Babelon, *Traité des monnaies*

forward for integrating the bronze denominations current at Alexandria at the same time into the imperial system.⁴⁹ The coinage of Thessalonica is another instance where such agreement must exist though the coins are too rare to make this immediately evident.

The works already discussed were not treated critically in the most recent of the large studies devoted to the coinages of this period, and their effect on the historians is therefore excessive. Le Gentilhomme, in his masterful synthesis of the numismatic evidence concerning the barbarian coinages of the West, supported the hypothesis proposed by Stefan and accepted the view that at least some of these solidi were struck at Thessalonica.⁵⁰ The solidi, according to Le Gentilhomme, were struck for the purpose of using them to pay the tribute money to the barbarian Avars who, when striking their own currency, imitated the light weight solidi of Heraclius and Constantine IV Pogonatus. To prove his point Le Gentilhomme referred to the discussion by Jónás of the supposed Avar currency found in Hungary.⁵¹ The supposed Avar coins, however, cannot be shown to be imitations of the light weight solidi even though the weights are far below the Byzantine limits. Where prototypes can be discerned they are clearly not the light weight pieces. In some instances the emperor is dressed in consular garb, but none of the light weight solidi show such portraiture. In the few cases in which the inscription in the reverse exergue can be deciphered it contains the inscription CONOB or a corruption of that Byzantine formula. Even the weights are not uniform, and no determination of the standard is possible. Jónás felt that a weight of approximately twenty siliquae was possible, but the evidence is very weak. It is, however, certain that the Avars, if

grecques et romaines, I, pt. I, cols. 616–617. Cf. Mommsen, *Histoire de la monnaie romaine*, trans. Duc de Blacas, III, p. 166.

⁴⁹ West and Johnson, *Currency in Roman and Byzantine Egypt*, pp. 104–105. Cf. *Ibid.*, p. 114, and Mommsen, *Histoire de la monnaie romaine*, trans. Duc de Blacas, III, p. 167.

⁵⁰ P. Le Gentilhomme, "Le Monnayage et la circulation monétaire dans les royaumes barbares en occident (Ve–VIII^e siècle)," *Revue numismatique*, 5^e série, VIII (1944–45), pp. 21–22, 34–36. P. Le Gentilhomme, "Aperçu sur quelques aspects du monnayage des peuples barbares," *Mélanges de numismatique mérovingienne*, pp. 137–138.

⁵¹ Elemér Jónás, "Monnaies du temps des Avars en Hongrie," *Demareteion*, I (1935), pp. 130–136.

they ever issued coins, could not have begun striking them before the third decade of the seventh century and that most of their currency is in imitation of pieces struck in the second half of the seventh century.

The excavations in Hungary, however, clearly show a higher degree of civilization among that barbarian people than had previously been assumed. The existence of the balance type of weighing mechanism among them was well attested by the excavations, and since their coins varied widely in weight they probably passed by weight. The expression "*sans doute*" which Le Gentilhomme used in stating that the light weight solidi were primarily used in the tribute payments is perhaps too strong in view of the evidence. Jónás article does not add materially to the solution of the problem of the light weight solidi even though it is a very significant contribution to any study of the Avars. No authentic Byzantine solidi of the light weight series were reported by Jónás.

In 1947 Leo Schindler and Gerhart Kalmann studied the light weight solidi.⁵² Unfortunately their work did not take into account all of the material available. They maintained that the coins marked OBXX or retrograde BOXX had a theoretical weight of twenty siliquae, those marked OB** or OB+* a theoretical weight of twenty-two siliquae and those marked BOΓK a theoretical weight of twenty-three siliquae because the inscription was retrograde. The coins which did not bear the letters OB or BO they wisely separated from the remainder and excluded as probably barbaric imitations. The conclusion regarding twenty-carat solidi was based on the fact that such coins showed an average weight of 4.069 grammes and the theoretical weight of coins at twenty-two carats was 4.169 grammes.

In their discussion of the bronze coins from Alexandria marked ΛΓ (33), however, they reverted to the problem of the light weight solidi. They pointed out that the number of nummi that equalled a follis remained constant and was indicated by a mark of value. Whether 210 folles or 180 folles were equivalent to a solidus would not have changed the relationship of the nummus to the follis. Procopius, however, tells of a change in the valuation of the solidus from 210

⁵² Leo Schindler and Gerhart Kalmann, "Byzantinische Münzstudien. I. Goldmünzen unter 24 Carat von Justinian I. bis Constantin IV.," *Numismatische Zeitschrift*, LXXII (1947), pp. 107-112.

folles to 180 folles. Thus the number of folles which could be exchanged for a solidus was subject to an imperial decree. Since this change in the relationship between the follis and the solidus is not reflected on the follis by different marks of value, it would be logical to presume that it indicates a change in the value of the gold coins by one-seventh of their intrinsic value.

Therefore Schindler and Kalmann, on the basis of the two passages in Procopius regarding the exchange value of the solidus, arrived at the conclusion that Justinian had reduced the intrinsic value of the solidus.⁵³ Five hundred of the older solidi would have sufficed for the striking of 583 newer ones, but the newer ones must have been given the same valuation as the older ones or the government would have derived no benefit from the change. Edict XI of the Emperor Justinian was wrongly interpreted by these two scholars as indicating that in the year 559 A.D. the Emperor used all of the means at his disposal to maintain the fiat value of his debased currency. This, of course, does not accord with the latest interpretation of that edict by West and Johnson.⁵⁴ Schindler and Kalmann viewed this edict as re-

⁵³ "Unter der Regierung Justinians I. fand stillschweigend eine Verringerung des inneren Wertes der Goldmünzen statt, weil der Kaiser ihren Feingehalt fast um $\frac{1}{8}$ heruntergebracht hatte (Procopii anec. 22. 38 u. 25. 12). Fünfhundert alte Solidi genügten um sechshundert neue daraus zu schlagen, wie man mit Recht annehmen kann. Die neue verschlechterte Münze sollte aber als gleich gut, wie die alte angenommen werden, sonst hätte die nicht offen einbekannte Münzverschlechterung keinen Sinn gehabt." Schindler and Kalmann, "Byzantinische Münzstudien. II. Das 33 Nummistück Justinians I.," *Numismatische Zeitschrift*, LXXII (1947), p. 110. Unfortunately the two passages in Procopius do not explicitly support this view of a debasement, but the value of the solidus was lowered by one-seventh. Instead of 600 new coins from the same amount of gold that had previously sufficed for 500, however, only 583 pieces could be struck at a lower weight. The value of the solidus according to Procopius was lowered from 210 folles to 180 which is a reduction of one-seventh and not one-sixth. The statements of Schindler and Kalmann have been corrected in the text.

⁵⁴ Edict XI (ed. R. Schoell and G. Kroll, *Corpus Iuris Civilis*, III, p. 777). The text and a Latin translation are given. G. Ostrogorsky, "Löhne und Preise in Byzanz," *Byzantinische Zeitschrift*, XXXII (1932), p. 296, note 3, interprets this edict to mean that solidi were issued at $\frac{1}{8}$ of a pound. Mommsen, *Histoire de la monnaie romaine*, trans. Duc de Blacas, III, pp. 66-67, says that the mint officials defrauded the public by exchanging only sixty-three new solidi for a pound of gold. The decree is, however, of 559 A.D., and by that time Egypt had a bronze coinage which was peculiar unto itself. The crucial phrase in the edict is ἀπόλυτων Ἀιγύπτιον Χάραγμα. It occurs only in Edict XI and in

proaching the Egyptian officials because they evaluated gold, whether in the form of coins or bullion, solely in terms of fineness and weight. Thus the Alexandrian mint masters were diverging from the practice of the Constantinopolitan mint which in accordance with the imperial will had lessened the intrinsic value of the gold currency. The authors therefore assumed that gold was struck in Alexandria, and that the coins which resulted differed from those issued at Constantinople. It was then noted that the light weight solidi were derived from *officinae* nine and ten which had previously been attributed only to the mint of Constantinople. It was a difficult feat to attribute these two *officinae* to the Alexandrian mint, but there were no other coins which could have been attributed to that mint, and according to their interpretation of Edict XI there must have been solidi issued there. Even though the numbers of the *officinae* were such that the mint of Constantinople was indicated still the usual formula CONOB had been replaced by the OBXX exergual mark. It was proposed therefore that what Procopius had reported was an actual debasement of the metal carried out at the capital, but that at Alexandria pure gold coins approximately one-seventh lighter were issued. The debased solidi and the lighter solidi would be equivalent in value. Perhaps the peculiar conditions in Egypt and the fact that foreign trade required pure gold necessitated this peculiarly Egyptian solution of the imperial proposal.

Papyrus Oxyrhynchus 144 of 580 A.D. The editors of the papyrus suggest that gold at a different standard is meant, but the proposal of West and Johnson is more probable. Since they have successfully explained the various standards, public, private, Alexandrian, goldsmith's, etc., as accounting devices, they have put forth the view that what was contemplated in this edict was an exchange of the peculiar bronze currency of Egypt for gold. Originally there was a charge known as *obryza* set for this exchange of base metal Egyptian coins into gold according to those two scholars. Justinian, it would seem from *Edict XI*, suppressed that charge. For a full discussion of *Edict XI* see West and Johnson, *Currency in Roman and Byzantine Egypt*, pp. 189ff. Cf. Josef Wilhelm Kubitschek, "Beiträge zur frühbyzantinischen Numismatik," *Numismatische Zeitschrift*, XXXIX (1897), pp. 174-177, who treats *Edict XI* as evidence that there were solidi of below twenty-four siliquae of value circulating in Egypt. Charles Diehl, "Une crise monétaire au VI^e siècle," *Revue des études grecques*, XXXII (1919), p. 159, identifies the τὸ ἀπόλυτον Χάραγμα as gold of less fineness than normal solidi. He builds his entire case around this interpretation.

The issuance of folles marked ΛΓ or thirty-three nummi, however, in place of those of Μ or forty nummi would seem to be an attack on the imperial monetary policy. It would at the same time be a reflection of the peculiar Egyptian solution of the problem.

This hypothesis is very ingenious but far from convincing. There is not the slightest evidence that the light weight solidi were struck in Egypt, and the fact that none of them have ever been found in that province would seem to militate against such a premise. The passages from Procopius on which a debasement of the normal twenty-four siliquae solidi is based cannot be used to support that contention. A careful scrutiny of the passages at a later stage will show that the wording supports a light weight coinage and not a debasement. Studies of the coin alloy are few and in many cases inconclusive, but they all support the belief that the normal solidi were of relatively fine gold whereas in the few instances in which the light weight solidi have been subjected to such analysis it is clear that some debasement had been determined upon. This alone, of course, would demolish the thesis put forward by Schindler and Kalmann, but to proceed a bit further, Edict XI cannot be used in the manner suggested by these two scholars. The work of West and Johnson, which has already been cited several times, seems conclusive. The interpretation supported by Schindler and Kalmann is therefore no longer tenable. Even the view that ΛΓ indicated thirty-three nummi on the Alexandrian bronzes is open to suspicion in the light of the new proposed reading of three *lita* which may have equalled thirty-six nummi.⁵⁵ The hypothesis suggested by Schindler and Kalmann must be discarded.

In 1948, however, Marcel Jungfleisch wrote an excellent article on the subject of isolated letters found on Byzantine solidi of the seventh century, and his work bears a direct relationship to that of Schindler and Kalmann though it was completely independent.⁵⁶ Jungfleisch made some interesting observations that are applicable to the problem of the light weight solidi though he did not offer a

⁵⁵ West and Johnson, *Currency in Roman and Byzantine Egypt*, pp. 104–105. Cf. Ibid., p. 114, and Mommsen, *Histoire de la monnaie romaine*, trans. Duc de Blacas, III, p. 67.

⁵⁶ Marcel Jungfleisch, "Conjectures au sujet de certaines lettres isolées se rencontrent sur les solidi byzantins du VII^e siècle," *Bulletin de l'Institut d'Égypte*, XXXI (1948–49), pp. 103–120.

complete treatment of the question. He interpreted the exergual formula CONOB as meaning "gold of the quality of Constantinople" rather than "struck at Constantinople." Then he noted that many mints of the Byzantine Empire were used for the striking of gold, and that they often did so in the names of other mints. This freed Byzantine numismatics from the rigid bonds which had largely impeded its full development. The isolated letters which are sometimes found in the field of Byzantine solidi were to be interpreted as either dates or indications of mints striking coins for other mints. As just pointed out, this novel thesis required a completely new approach to Byzantine gold currency in particular. The legend in the exergue now became purely an indication of the fineness of the alloy of the gold coins. On that basis Jungfleisch suggested a table of fineness which was based on findings utilizing the touchstone to determine the actual gold content of the solidi. In the next chapter this table of fineness will be discussed in detail, but it can be stated at this point that certain objections might be leveled against the methods used by Jungfleisch. Unfortunately no series of chemical, spectroscopic, or specific gravity analyses was given to support the table, but according to Jungfleisch himself the use of the touchstone indicated that solidi rarely attained what he considered their theoretical fineness but showed perhaps an extra half-carat, and sometimes more, of debasement. The precision of the results seem somewhat excessive in view of the technique employed, but only tests by other methods can resolve any doubts. Perhaps the peculiar code used in the exergual markings of the solidi to indicate the standard of purity was designed so that the baser coins could be used in foreign trade? Only a long series of analyses or the chance finding of a new text could resolve the problem.

It is hardly possible at this time to evaluate the implications of the thesis propounded by Jungfleisch in all of its aspects, but it should suffice for our purposes to point out that it can hardly be considered a complete solution of the problem of the light weight solidi. It is only for the sake of completeness that the work done by Jungfleisch and Philip Grierson can be included in this chapter. These men in no way attempted a complete study of the problem. They merely sought to indicate some suggestive paths based upon their acute observations,

and it will be shown in the course of this study just how astoundingly acute their observations and suggestions were.

In the course of studying the St. Martin's hoard of Frankish and Anglo-Saxon coin-ornaments, Mr. Grierson noted that the light weight system of gold coins in use in Gaul in the late sixth century represented "the victory of a traditional Germanic weight, originally based on the Roman Republican denarius, over the slightly heavier solidus which the invaders had found in use in the imperial provinces which they had occupied—but regarding the circumstances of the change and the methods by which it was carried out we are almost entirely in the dark." He further suggested that the light weight solidi were "apparently for use of the merchants trading with the Germanic world."⁵⁷ These statements will be expanded upon greatly in later sections of this study because they seem to indicate particularly fruitful channels of investigation. They should, however, also be judged in the light of Mr. Grierson's latest statement regarding the light weight solidi. In the course of studying a hoard of Byzantine solidi from North Africa in which a light weight solidus occurred, Mr. Grierson stated that it was most probably some local demand within the Empire which called for the issuance of these solidi.⁵⁸ Again there is not very much that can be done to evaluate the validity of such a statement which is in the nature of an *obiter dictum*, but it can be pointed out that it will not serve to explain the fact that of all of the light weight solidi which have been found throughout the length and breadth of Europe only twice have they been found in clearly Roman sites.

In fine, it may be stated clearly that the situation with regard to these light weight solidi is more fluid than is generally supposed. There has up to the present moment been no explanation put forward which can be shown to have a firm historical background and which can explain both the light weight of the coins and the location of the finds as well as the time period within which they are found. Abso-

⁵⁷ Philip Grierson, "The Canterbury (St. Martin's) Hoard of Frankish and Anglo-Saxon Coin-Ornaments," *British Numismatic Journal*, XXVII (1952), p. 50.

⁵⁸ Philip Grierson, "A Byzantine Hoard from North Africa," *Numismatic Chronicle*, Series 6, XIII (1953), pp. 147-148.

lutely no work has been done on the iconography of these coins, which indeed shows some interesting features, as well as upon the alloy of these pieces, though Jungfleisch does indicate that he believes them to be of worse alloy than the normal Byzantine solidi. It is because of these reasons that the current work has been taken in hand. But to a historian, of course, the coins themselves can only be of interest insofar as they give us some new information concerning the period to which they refer. It may well be impossible to give an explanation of some of the numismatic aspects of the problem. The texts are not sufficiently explicit to yield absolutely certain conclusions. Rather we should attempt to use the coins as documents with which to study the world at the time of their issuance.

THE COINS

Probably the most important of the characteristics of the solidi under discussion is their weight. The treatment accorded these coins in the past has always been something less than scientific with respect to metrology. Pieces of poor condition or of doubtful origin have been confused and grouped with those of a single authentic series, and there has been an almost universal dependence upon the calculated average weights in the determination of the standards and the accuracy of minting.

The brilliant Finnish numismatist and economic historian, Gunnar Mickwitz, before his untimely death, demonstrated conclusively the value of proper statistical technique in the use of the frequency curve for grouping and studying metrological data.¹ His description of the technique is sufficiently complete to require little elaboration. Basically the methods of statistical analysis do not differ from one field of learning to another, but the conclusions derived may well be different.² In numismatics it has been shown that in grouping metrological data according to the tally or frequency table, the step interval must be determined by the weight standard that was in use at the mint. Thus, if the tally were made on the basis of a step interval of three-hundredths of a gramme while the mint could only determine weights to two-tenths of a gramme accuracy, the frequency curve would be lower vertically and would show an unusual degree of multimodalism which might serve to obscure the actual theoretical standard at which the coins were struck as well as the measure of

¹ Gunnar Mickwitz, "Die Systeme des römischen Silbergeldes im IV. Jhdt. n. Chr. Ein Beispiel zur Anwendung der variationsstatistischen Methode in der Numismatik," *Societas Scientiarum Fennica. Commentationes Humanarum Litterarum*, VI, 2 (1932), pp. 38-67.

² Mickwitz, made use of three of the standard works on statistical technique. C. V. L. Charlier, *Vorlesungen über die Grundzüge der mathematischen Statistik* (Lund, 1920; 2nd edition, 1931); W. Johannsen, *Elemente der exakten Erblichkeitslehre mit Grundzügen der biologischen Variationsstatistik* (3rd edition: Jena, 1926); W. Winkler, *Grundriss der Statistik* (Berlin, 1931). He also used G. F. Hill, "The Frequency Table," *Numismatic Chronicle*, Series 5, IV (1924), pp. 76-85.

accuracy of the mint. This will be graphically demonstrated at a later point.

The graphic representation of the frequency table is most correctly given in the form of a histogram or skyline type of bar graph in which the frequencies are plotted on the vertical bar and the steps on the horizontal bar. If the laws of probability were the sole operating factors, the curve drawn through the histogram following the frequencies would be bell-shaped and symmetrical. As a result of the fact that coins which are struck *al-pezzo* are adjusted as to weight and the heavier pieces are returned to the melting pot much more frequently than the lighter pieces, the frequency curve in numismatics commonly shows a higher degree of skewness than would normally be expected. Such skewness is not statistically a serious matter, but it is a graphic representation of the accuracy with which the weight of individual coins was adjusted at the mint. A more serious defect of great significance would be a bimodal curve or one which resembled the Asiatic camel in showing two humps or zeniths. If such a figure should result from the distribution of the metrological data, it would serve as visual evidence that the data was not homogeneous and that more than one standard of weight was involved. It would then be necessary to distinguish and separate the two series or denominations before treating the material further.

The next step, of course, must be to measure in arithmetic terms the central tendency of the weights to gather around a single point with increasing frequency. This figure will give some indication of the theoretical weight at which the coins were struck. Clearly whatever value is determined will be below the theoretical weight by reason of wear and possibly seigniorage. The first of such measures of central tendency is simply the mode (**Mo**) or point of highest concentration on the frequency table. Manifestly this is a very crude measure because the modal point does not take into account the mass of metrological data which deviates from the modal step. Still another measure of central tendency is the mean (**M**) or average weight which, of course, is simply the result of the division of the sum of all of the weights by the number of instances or coins. This is a much finer measure of central tendency for metrological data, but it has the drawback that it weights the few coins which deviate widely from the central point

much more heavily than those which are nearer that point. Thus just a few coins which diverge widely from the central point of concentration can affect the result to a degree far out of proportion to their actual significance. The third measure of central tendency is the median (Mdn) which is nothing more than the mid-point in an array of weights or more exactly that point above which and below which fifty percent of the weights fall. The median value is more representative than the mean in that all weights enter into its calculation with exactly the same stress. It can be used with a greater degree of confidence in those instances in which a few atypical cases would distort the picture of the central tendency as measured by the mean.

If the frequency curve were bell-shaped and perfectly symmetrical as in the case of the normal probability distribution, the mode, mean and median would all fall at the same point. In numismatics, as has been shown, this is not to be expected, particularly in the case of coins struck *al-pezzo*, therefore the three values should be calculated, and the conclusions which are drawn from them must take the different values into account in terms of the natural or expected results of the minting process and the state of the coins.

Next, the numismatist must calculate the measure of deviation or variability evident in the series of weights. Arithmetic expressions which will indicate the extent of variability are an absolute necessity for the numismatist. The simplest of all such numerical values, of course, is the range which is nothing more than the difference between the highest and lowest weights. It is without question the crudest of all such measurements because it is calculated solely on the basis of two weights and excludes the vast majority of the weights collected. The mean deviation (MD) is a much more useful measure for the numismatist because every single weight in the frequency table enters into its determination. It may be briefly defined as the mean of the sum of all the deviations from the mean. The formula $MD = \frac{\sum |D|}{N}$

is used to determine its value where Σ indicates the sum, N the number of weights, and D the deviation from the mean in each individual instance while the plus and minus signs are ignored. It will result in a value expressed in the same metrological units as the frequency table step interval, and that value when added to and

subtracted from the mean will cover the majority of the cases involved in the construction of the frequency curve. When calculated for the normal probability curve the value of the mean deviation will indicate a range within which approximately fifty-seven percent of the total area under the frequency curve will be included. If the value of the mean deviation were high, it would serve as a clear indication that either the coins were struck with very little or no adjustment of weight, as in the case of *al-marco* minting, or else that more than one denomination or series of coins was involved in the collection of the data. Where two theoretical weights that were relatively close were involved there is the possibility that bimodalism would not be immediately evident from the frequency curve by visual inspection, but a high value for the mean deviation would certainly indicate that closer study was advisable.

A further measure of deviation or variability is the so-called standard deviation (σ) which is usually too refined for use in numismatics. In calculating the standard deviation the formula $\sigma = \sqrt{\frac{\sum D^2}{N}}$ which may be expressed as the square root of the mean of the squares of all deviations from the mean, is used. When the number of weights is small there is no need for such refined calculations. The value of σ is always larger than the mean deviation, and when measured off above and below the mean delimits the area for approximately the central sixty-eight percent of the cases on a normal probability curve.

These measures of deviation or variability are not directly comparable with other measurements of deviations for other data. There is a definite need for an arithmetical expression to indicate relative variability. Since the means of two different series of coins are likely to be different, and this will often affect variability, the coefficient of variation (V) has been proposed to make allowance for the difference in the means. The formula to calculate the coefficient of variation is a simple one ($V = \frac{100\sigma}{M}$), and it makes comparisons possible. It is best to compare different series of coins or denominations to determine the accuracy of the minting process in terms of coefficients of variation rather than standard deviations or mean deviations. The coefficient of variation yields a numerical value in terms of a scale beginning

with a zero point, and since metrological data is involved in the numismatic use of the frequency table it can be employed with confidence.

The use of the frequency curve is, of course, covered in much greater detail in the work of Gunnar Mickwitz which has already been cited, and many of the examples which are given there for gold coinage can be used for comparison. Mickwitz plotted the frequency curves of gold coins during several periods in most scholarly fashion. The number of coin weights involved can be indicated by the letter N and the step interval by the lower case letter w. It is really unnecessary to construct the histogram to show the numerical values, and therefore only the tally and the results of Mickwitz's calculations will be reproduced. The curves themselves are readily accessible in Mickwitz's work.

The gold issues from the period of Gallienus yielded some interesting results in that it was evident from the calculations that more than one standard of weights was involved.

$$N = 328 \quad w = 0.3 \text{ grammes} \quad M = 3.23 \text{ grammes} \quad \sigma = 1.324 \text{ grammes} \\ V = 40.99$$

STEP	NO. OF COINS	STEP	NO. OF COINS
6.7-7.0	1	3.7-4.0	17
6.4-6.7	3	3.4-3.7	22
6.1-6.4	4	3.1-3.4	32
5.8-6.1	6	2.8-3.1	26
5.5-5.8	5	2.5-2.8	31
5.2-5.5	10	2.2-2.5	29
4.9-5.2	8	1.9-2.2	27
4.6-4.9	16	1.6-1.9	13
4.3-4.6	21	1.3-1.6	15
4.0-4.3	20	1.0-1.3	15
		0.7-1.0	7 ³

³ These weights were taken from K. Menadier, *Die Münzen und das Münzwesen bei den Scriptores Historiae Augustae* (Diss. Berlin, 1913), pp. 65 ff. The accuracy of σ is carried much too far.

It is immediately evident that the frequency curve constructed on the basis of the distribution given above would be multimodal and that the average weight of 3.23 grammes would be a meaningless figure. The standard deviation of 1.324 grammes is better than a third of the mean weight of the coins and the coefficient of variation of 40.99 is so high that it cannot possibly be true for a single standard. A frequency curve constructed on the basis of 278 Roman denarii of the period from Nero to Septimius Severus yielded a coefficient of variation of only 6.94 while the silver was probably struck *al-marco* and the gold must have been struck *al-pezzo*.⁴ The value of the frequency curve for detecting non-homogeneous gold coinage can be clearly seen in this example. Even though the step interval of 0.3 grammes is not very fine and Mickwitz may have used the method for calculations from grouped data, which is not as accurate as for ungrouped data, the character of the material stands out.

Another example of a frequency curve based on gold coins was plotted by Mickwitz with the data published by Cesano from the Via Po hoard of Rome.⁵ The 373 gold coins in that hoard yielded results showing the accuracy of the minting of gold coins at Rome.

It is immediately apparent that Mickwitz has refined his calculations too much in the light of his data. It is possible that aurei were weighed to an accuracy of 0.1 grammes, but the calculation of the probable error in the case of the standard deviation to a value of ± 0.0057 grammes is quite meaningless when referred to ancient mint practices. Such refined calculations can only give a distorted sense of

⁴ Mickwitz, *op. cit.*, p. 43. The weights were collected by Theodor Mommsen, *Geschichte des römischen Münzwesens* (Berlin, 1860), p. 757, note 60. Mommsen's weights were gathered from J. Y. Akerman, *A Descriptive Catalogue of Rare and Unedited Roman Coins from the Earliest Period of the Roman Coinage to the Extinction of the Empire under Constantinus Paleologus* (London, 1834), I, pp. XV–XVII.

⁵ Mickwitz, *op. cit.*, p. 45. See also L. Cesano, "Ripostiglio di aurei imperiali rinvenuto a Roma," *Bullettino archeologico comunale di Roma*, LVII (1929), pp. 1–120, where the weights of the individual coins are collected. Since the weights were in part calculated only to the tenth of a gramme and in other instances to 0.05ths of a gramme there was some difficulty in preparing the frequency table with a step interval of 0.1 grammes, which accounts for its form. The curve cannot therefore be considered absolutely accurate. Mickwitz calculations again seem somewhat overly refined.

$N = 373$ $w = 0.1$ grammes $M = 7.067$ grammes $Mo = 7.04$ grammes
 $\sigma = 0.16 \pm 0.0057$ grammes $V = 2.26$

STEP	NO. OF COINS	STEP	NO. OF COINS
6.05-6.1	1	6.85-6.9	25
6.15-6.2	0	6.95-7.0	108
6.25-6.3	1	7.05-7.1	111
6.35-6.4	3	7.15-7.2	86
6.45-6.5	3	7.25-7.3	19
6.55-6.6	0	7.35-7.4	5
6.65-6.7	2	7.45-7.5	0
6.75-6.8	7	7.55-7.6	2

accuracy, but the results are nevertheless quite revealing. Even though the coinage involved extends in time from the reign of Nero to the time of Lucius Verus inclusive, and the range from 7.6 grammes to 6.5 grammes as a result of wear, the coefficient of variation is still only 2.26 as compared with 40.99 for the gold coinage of the period of Gallienus and 6.94 for the denarii from the reign of Nero through the reign of Septimius Severus. These coins were clearly struck *al-pezzo* and were most accurately adjusted at the mint. The curve, however, is unusual in that it shows a remarkable degree of symmetry which Mickwitz quite properly attributes to the fact that the hoard covers a full century of time and the more recent coins in the find were in excellent condition and had not been worn while others were quite worn. The more typical skewness is evident if only the seventy-nine

$N = 79$ $w = 0.1$ grammes $M = 7.085$ grammes $Mo = 7.2$ grammes
 $\sigma = 0.18 \pm 0.014$ grammes $V = 2.5$

STEP	NO. OF COINS	STEP	NO. OF COINS
6.25-6.3	1	6.85-6.9	2
6.35-6.4	1	6.95-7.0	15
6.45-6.5	0	7.05-7.1	18
6.55-6.6	0	7.15-7.2	28
6.65-6.7	1	7.25-7.3	9
6.75-6.8	2	7.35-7.4	2

coins which are attributed to the reign of the Emperor Hadrian are plotted on a frequency curve.

These coins were excellently preserved and in a large degree were *fleur de coin*. Now the rapid decline of frequency on the positive side of the mode is immediately evident as contrasted with the more gentle decline on the underweight side of the curve. This, of course, is largely the result of the fact that the weight of the coins was carefully adjusted, and the heavier ones were returned to the melting pot with greater frequency than the lighter ones.⁶ Once again, of course, the accuracy of the gold coinage is most noticeable.

A good comparison for the frequency curves of the light weight solidi is to be found in the curve plotted by Mickwitz on the basis of the solidi from the Dortmund hoard and the Weber Collection. These solidi are all of the period 307-408 A.D., and as a result they are at least 150 years earlier in time than the light weight solidi.

$N = 150$ $w = 0.03$ grammes $M = 4.417$ grammes $Mo = 4.45$ grammes
 $\sigma = 0.092$ grammes $V = 2.08$

STEP	NO. OF COINS	STEP	NO. OF COINS
3.96	1	4.29	5
3.99	0	4.32	4
4.02	0	4.35	12
4.05	0	4.38	12
4.08	0	4.41	24
4.11	2	4.44	25
4.14	0	4.47	35
4.17	1	4.50	12
4.20	2	4.53	6
4.23	1	4.56	3
4.26	3	4.59	1
		4.62	1 ⁷

⁶ Cf. Mickwitz, *op. cit.*, p. 43, for a fuller explanation.

⁷ Mickwitz, *op. cit.*, p. 44. The weights were gathered by Arnold Luschin von Ebengreuth, "Der Denar der Lex Salica," *Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften*, Phil.-hist. Klasse, CLXIII (1910), Abh. 4, pp. 63 ff., on the basis of the weights recorded by K. Regling, *Der Dortmunder*

If the distribution were made on a sounder basis by using the weight of the half-carat or half-siliqua (0.095 grammes) as the step interval instead of 0.03 grammes the results would be even more striking when plotted though none of the arithmetic values, which are really independent of the histogram, would be affected.

STEP	NO. OF COINS	STEP	NO. OF COINS
3.790–3.885	0	4.265–4.360	24
3.885–3.980	1	4.360–4.455	61
3.980–4.075	0	4.455–4.550	53
4.075–4.170	2	4.550–4.645	5
4.170–4.265	4		

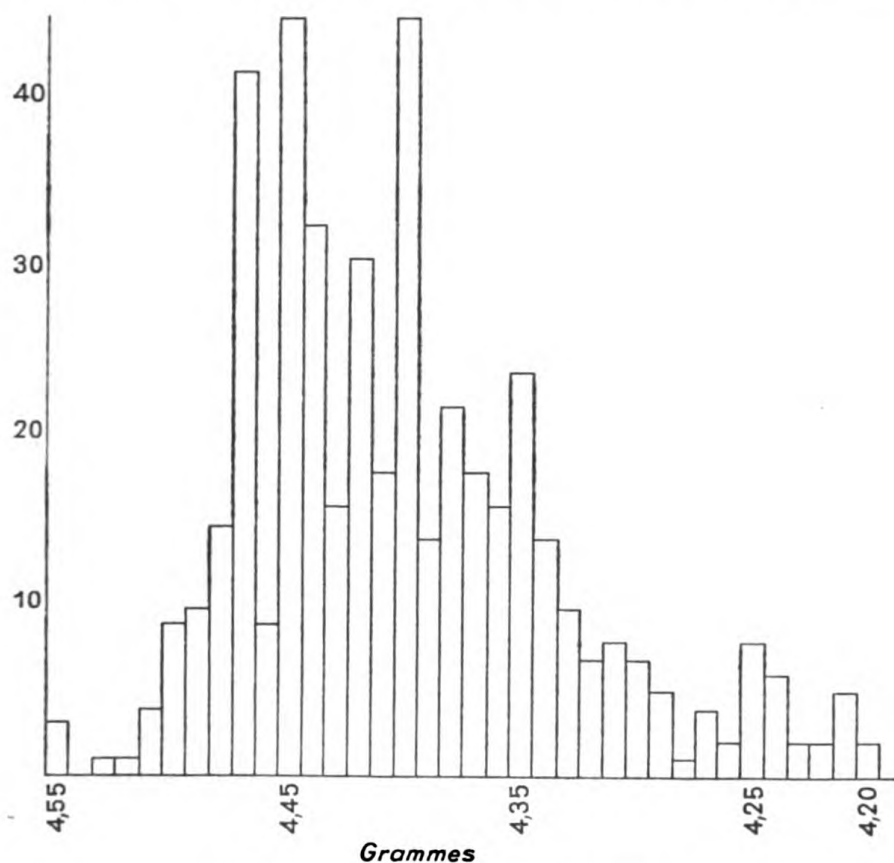
All of the characteristics of the curve are accentuated by such a step interval. The very sharp decline in frequency on the positive side is now most evident. If a very large number of coins were involved this could eliminate a seeming bimodalism. Such bimodalism could, of course, be discounted on the basis of the arithmetic or numerical values calculated to measure the deviations, but if it appeared on the tally or frequency table without such calculations it, could be most disturbing.

A frequency curve constructed on the basis of the weights of 459 solidi weights gathered by Luschin von Ebengreuth may be used to demonstrate this (Fig. 1), and at the same time it provides us with the finest basis of comparison for the frequency curves of the light weight solidi.⁸ These coins cover the period from the reign of Anastasius through that of Constans II and are therefore directly comparable with the solidi studied in this book. Unfortunately each of the three

Fund römischer Goldmünzen (Dortmund, 1908), and Dr. J. Hirsch, *Sammlung Consul Eduard Friedrich Weber† Hamburg. Zweite Abteilung: Römische und byzantinische Münzen. Nachtrag griechische Münzen. Münzgewichte. Numismatische Bibliothek* (München, 1909), which is Hirsch Sale XXIV, 10 May 1909.

⁸ Luschin von Ebengreuth, *op. cit.*, pp. 70–71. The weights are gathered from W. W. Wroth, *Catalogue of the Imperial Byzantine Coins in the British Museum* (London, 1908), 2 vols.; Dr. J. Hirsch, *Sammlung Consul Friedrich Weber†* (Hirsch Sale XXIV, 10 May 1909); and Josef Wilhelm Kubitschek, "Beiträge zur frühbyzantinischen Numismatik," *Numismatische Zeitschrift*, XXIX (1897), pp. 162–192, which on pp. 190–191, gives the weights of the solidi in the Imperial Cabinet in Vienna at that time.

sources involved contained some of the light weight solidi, but since Luschin von Ebengreuth limited the range of the solidi included in his frequency table to those above 4.20 grammes but below 4.55 grammes,



Solidi from Anastasius to Constans II
Fig. 1

this difficulty is largely eliminated. Only in the rarest instances do any of the solidi in the several light weight series rise to weights of 4.20 grammes or better. The same may be said for the number of normal solidi which show weights above 4.55 grammes. Thus of the 150 solidi in the frequency curve from the Weber Collection and the Dortmund hoard only five weighed more than 4.55 grammes, and three of those five weighed 4.56 grammes. The overwhelming bulk of all of the solidi issued in the period 491-668 A.D. certainly must fall into the range of 4.20-4.55 grammes. The few that are excluded could

not affect the results appreciably. A number of coins in the group, however, have been pierced, but even in this instance less than five percent of the coins are involved, and since in many instances the weights remained fairly high, it may be that the coins were punched rather than drilled or filed. In any event the exclusion of these pierced coins would only serve to bring the few coins in question into even greater alignment with the measurements of central tendency.

The distribution as given by Luschin von Ebengreuth is multimodal with peaks at 4.47, 4.45, and 4.40 grammes.

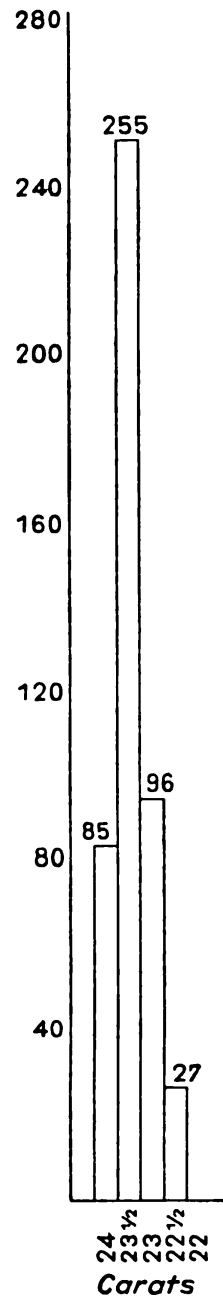
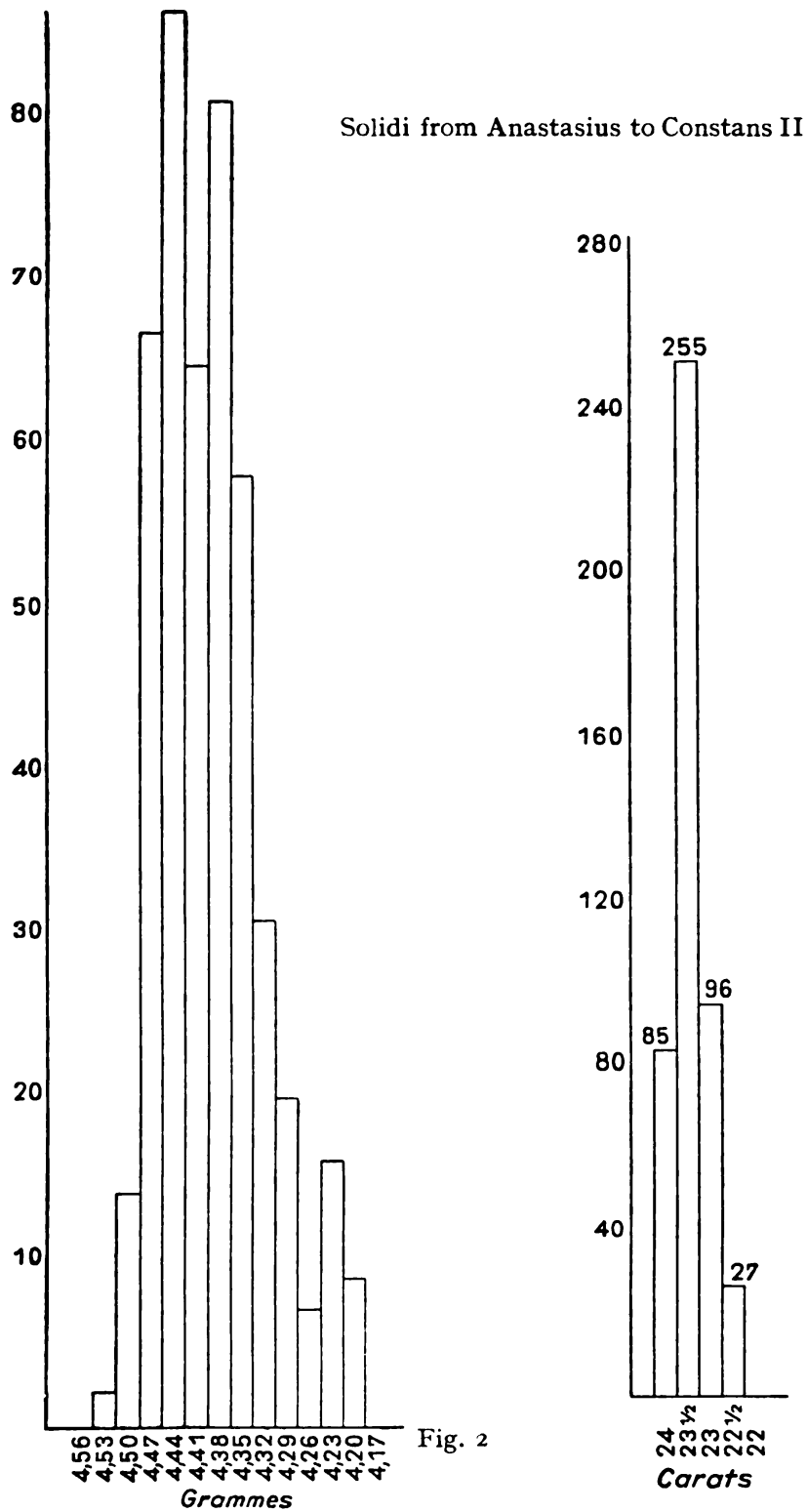
$N = 459$ $w = 0.01$ grammes $M = 4.40$ grammes $Mo = 4.45$ and 4.40 grammes with still another peak at 4.47 grammes $Mdn = 4.41$ grammes $MD = 0.052$ grammes $\sigma = 0.249$ grammes $V = 5.657$

Since the coefficient of variation is only 5.657 and the majority of the coins lie within 0.05 grammes of the mean, there is no question of a non-homogeneous group, and the multimodalism is the result of an improper step interval. Changing the step interval to 0.03 grammes will reduce the multimodalism even further while the numerical values calculated to measure the central tendency and deviation remain constant (Fig. 2). The two histograms show this graphically as do the frequency tabulations.

STEP	NO. OF COINS	STEP	NO. OF COINS
4.20-4.22	9	4.38-4.40	81
4.23-4.25	16	4.41-4.43	65
4.26-4.28	7	4.44-4.46	87
4.29-4.31	20	4.47-4.49	67
4.32-4.34	31	4.50-4.52	14
4.35-4.37	58	4.53-4.55	4

In the period following Constantine the *siliqua auri* or *keration* seems to have been the smallest weight used though it is probable that the Romans could detect and adjust weights to within half of a *siliqua*.⁹ In view of that fact we may assume that in the minting of

⁹ Cf. Friedrich Hultsch, *Griechische und römische Metrologie* (2nd edition: Berlin, 1882), pp. 133 ff., and 149-150. The *chalcus* was a weight used primarily by physicians in the imperial period. It was certainly the smallest of weights in use as shown by many passages even though there is mention of the quarter of



gold the coinage was adjusted to the nearest half-siliqua. Since the *siliqua auri* was valued at 0.1895 grammes of gold, the coinage would then have been adjusted to within 0.095 grammes of the theoretical weight. If that is taken as the step interval, the bimodalism disappears completely and the accuracy of the Roman mint is immediately evident (Fig. 3).

STEP	NO. OF COINS
22–22½ carats (4.170–4.264 grammes)	27
22½–23 carats (4.265–4.359 grammes)	96
23–23½ carats (4.360–4.454 grammes)	251
23½–24 carats (4.455–4.549 grammes)	85

If the step interval used in the construction of the histogram is the same as the standard of accuracy at the mint, all of those characteristics which have been noted in the frequency curves studied thus far are accentuated. Thus the modal step of this distribution is that from 23–23½ siliquae (4.36–4.45 grammes). The sharp decline in frequency on the positive side of the curve and the skewness of the curve towards the negative side are most clearly seen. More than fifty percent of the coins fall into the modal step which, however, is slightly larger than the mean deviation while the coefficient of variation (5.657) is low enough to indicate good adjustment of the coinage.

That these coins were meant to circulate at a theoretical weight of twenty-four siliquae cannot be doubted. Solidi were defined in law as coins of four scruples or twenty-four siliquae.¹⁰ The deductions for

the carat or σιτάριον. (*Metrologicorum Scriptorum Reliquiae*, ed. F. Hultsch (Lipsiae: B. G. Teubner, 1864–65), I, pp. 89, 222, 231, 245, 248 and 249). In imperial times the Roman and Greek metrological systems were combined. The obol was made equal to one-half of the scruple and the *chalcus* was equal to one-eighth of an obol. Thus 2⅔rds *chalci* were equal to one carat. The *chalcus* was occasionally defined as the weight of two chickpea grains or two grains of pulse. All of the pertinent passages are to be found in *Metrologicorum Scriptorum Reliquiae*, ed. F. Hultsch, 2 vols., s.v. κεράτιον, χαλκοῦς, *calcus*, *calculus*, *chalcus*.

¹⁰ *C. Th.*, XII, 7, 1 (325 A.D.) (ed. Mommsen and Meyer, I, pt. II, p. 722), describes the solidus as of four scruples. This part of the law is not repeated in the abridgement in *C. Just.*, X, 73, 1 (ed. Krueger, *Corpus Iuris Civilis*, II,

seigniorage and the wear that the coins have undergone account for an actual weight some two percent below the theoretical weight. The gold coins in the collections from which these weights were taken are generally in good condition, they are collectors' pieces in the fullest sense of the word and have not undergone quite as much wear as might be expected. It may therefore be presumed that the major portion of the two percent weight differential can be accounted for as the charge for seigniorage. Undoubtedly the Byzantines did not calculate this as a percentage of the theoretical weight of the coin but simply issued their gold solidi about one-half of a siliqua light. This observation may be confirmed by reference to the fact that the frequency table for the solidi of the period 307-408 A.D. from the Dortmund hoard and Weber Collection shows approximately the same weight loss. They are also approximately half of a carat lighter than the theoretical weight.

It is now possible, on the basis of the frequency curves that have already been reviewed in some detail, to study the frequency curves for the solidi of the light weight type. The Catalogue at the end of this book contains notes and descriptions concerning 183 coins. Some of these pieces, such as Coins nos. 13, 17, 22, 32, 37, 38, 53, 92, 100, 101, 102, 118, 125, 126, 136, 139, 141, 146, 153, 154, 155, 161, 162, 163, 164, 167, 168, 169, 174, 176, 178, and 179, must be excluded from a frequency table because they are either pierced, mounted, looped, or clipped.¹¹ With the possible exception of Coins nos. 125, 126, and 166 all of these operations affect the weight of the piece appreciably, and as a result these thirty-two solidi must be excluded from the

p. 427). The reasons for this have been discussed in Chapter one. There are many literary and legal texts indicating that the solidus which contained twenty-four siliquae was 1/72nd of a Roman pound. These texts, however, define the solidus in terms of its relationship to the Roman pound and not to the siliqua. The texts from the various metrological sources do confirm the relationship between the siliquae and the solidus. They can be easily found by reference to the indices of *Metrologorum Scriptorum Reliquiae*, ed. F. Hultsch, s.v. *Κεράτιον* and *siliqua*.

¹¹ Coins nos. 13, 22, 32, 53 and 176 are clipped; Coins nos. 124, 131, 153, 154, 155, and 169 are mounted, while Coins nos. 125, 126, and 167 show traces of mounting; Coins nos. 17, 37, 38, 84, 100, 101, 102, 139, 141, 146, 161, 162, 163, 164, 168, 174, 178, and 179 are pierced; and Coins nos. 92, 118, and 136 are looped.

frequency table. In addition Coins nos. 19, 27, 31, 35, 41, 43, 47, 48, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 69, 70, 71, 76, 77, 84, 91, 94, 98, 108, 109, 113, 121, 123, 124, 131, 135, 147, 151, 165, 173, 180, 181, and 182, are of unknown weight. These forty-two pieces must of necessity be excluded from the calculations. Thus the frequency curves can deal with only 109 coins. Certain of these 109 solidi, however, can be identified as barbaric in origin, and this reduces the number even further. Coins nos. 31, 32, 33, 72, 73, 74, 75, 76, 77, 78, 159, 181, 182, 183, are barbarian or derived from western mints of the Empire and not part of the light weight series under discussion, and of these Coins nos. 32 (clipped), 33, 72, 73, 74, 75, 78, 159, and 183 have known weights. Thus the number of coins for the frequency table is reduced even further to only 101 pieces. The reasons for identifying these fifteen coins as barbaric or as not belonging to the light weight series will be discussed somewhat later. The 101 coins that remain may be divided according to the exergual marks and presented in the form of grouped data for a frequency curve. The weights are calculated to the nearest hundredth of a gramme.

COIN NO.	WEIGHT	EXERGUE	EMPEROR
132	3.85	BOXX	Heraclius and Heraclius Constantine
4	3.79	OBXX	Justinian
149	3.76	BOXX	Heraclius and Heraclius Constantine
150	3.75	BOXX	Heraclius and Heraclius Constantine
23	3.75	OBXX	Justinian
12	3.74	OBXX	Justinian
10	3.74	OBXX	Justinian
177	3.73	BOXX	Constans II, Constantine IV Pogonatus, Heraclius and Tiberius
160	3.73	OBXX	Heraclius, Heraclius Constantine and Heracleonas
138	3.73	BOXX	Heraclius and Heraclius Constantine
137	3.73	BOXX	Heraclius and Heraclius Constantine
134	3.73	BOXX	Heraclius and Heraclius Constantine
119	3.73	BOXX	Heraclius and Heraclius Constantine
108	3.73	OBXX	Phocas

COIN NO.	WEIGHT	EXERGUE	EMPEROR
46	3.73	OBXX	Justin II
20	3.73	OBXX	Justinian
148	3.72	BOXX	Heraclius and Heraclius Constantine
35	3.72	OBXX	Justin II
18	3.72	OBXX	Justinian
14	3.72	OBXX	Justinian
9	3.72	OBXX	Justinian
8	3.72	OBXX	Justinian
5	3.72	OBXX	Justinian
133	3.71	BOXX	Heraclius and Heraclius Constantine
128	3.71	OBXX	Heraclius and Heraclius Constantine
21	3.71	OBXX	Justinian
16	3.71	OBXX	Justinian
11	3.71	OBXX	Justinian
166	3.70	OBXX	Constans II
144	3.70	BOXX	Heraclius and Heraclius Constantine
127	3.70	BOXX	Heraclius and Heraclius Constantine
122	3.70	BOXX	Heraclius and Heraclius Constantine
106	3.70	OBXX	Phocas
40	3.70	OB·XX·	Justin II
34	3.70	OBXX	Justin II
15	3.70	OBXX	Justinian
6	3.70	OBXX	Justinian
120	3.69	BOXX	Heraclius and Heraclius Constantine
117	3.69	OBXX	Heraclius
116	3.69	OBXX	Heraclius
2	3.69	OBXX	Justinian
145	3.68	BOXX	Heraclius and Heraclius Constantine
89	3.68	OBXX	Maurice Tiberius
88	3.68	OBXX	Maurice Tiberius
39	3.68	OB·XX·	Justin II
26	3.68	OBXX	Justinian
25	3.68	OBXX	Justinian
3	3.68	OBXX	Justinian
143	3.67	BOXX	Heraclius and Heraclius Constantine

4*

COIN NO.	WEIGHT	EXERGUE	EMPEROR
140	3.67	BOXX	Heraclius and Heraclius Constantine
110	3.67	OBXX	Phocas
152	3.66	BOXX	Heraclius and Heraclius Constantine
130	3.66	OBXX	Heraclius and Heraclius Constantine
7	3.66	OBXX	Justinian
156	3.65	BOXX	Heraclius and Heraclius Constantine
142	3.65	BOXX	Heraclius and Heraclius Constantine
36	3.65	OBXX	Justin II
24	3.64	OBXX	Justinian
107	3.63	OBXX	Phocas
109	3.62	OBXX	Phocas
45	3.62	OBXX	Justin II
158	3.60	OBXX	Heraclius and Heraclius Constantine
157	3.52	BOXX	Heraclius and Heraclius Constantine
44	3.51	OBXX	Justin II
42	3.47	OBXX	Justin II

$N = 65$ $w = 0.095$ $M = 3.69$ grammes $M_o = 3.70$ grammes M_{dn}
 $= 3.70$ grammes $MD = 0.0393$ grammes $\sigma = 0.1832$ grammes
 $V = 4.964$

As far as can be determined there is no evident relationship between the so-called *officina* marks at the end of the reverse inscriptions and the weights except that the mark ΘS does not occur for this series. All of emperors of the period from Justinian through Constantine IV Pogonatus struck coins of this type except Tiberius Constantine. Almost eighty-two percent of the coin weights are within 0.05ths of a gramme of the mean weight, and the coefficient of variation is only 4.978. Only two of the coins equal the weight of twenty siliquae fully, but if the same type of deduction of half a carat is made for seigniorage and wear, then we might assume an actual weight of $19\frac{1}{2}$ siliquae for these coins when they left the mint. Of course, the theoretical weight of the coins was meant to be twenty siliquae, and the interpretation of the inscription OBXX is probably OB (*ryzum*) XX (*viginti*) (*siliquae*).

Frequency Table of BOXX and OBXX Solidi

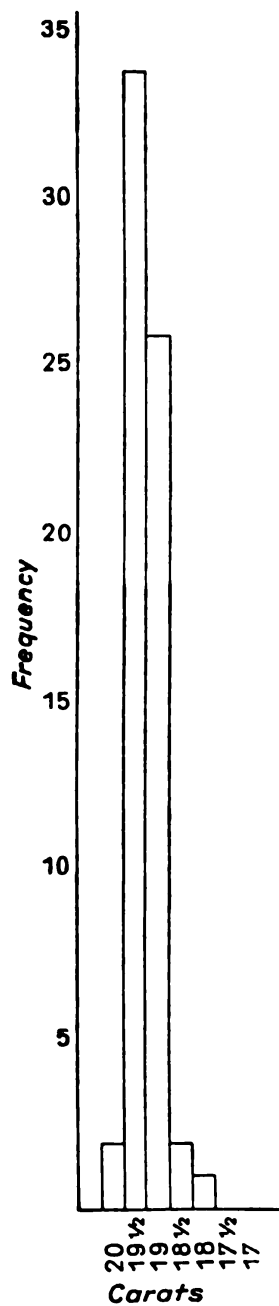


Fig. 4

Frequency Table of OB*+*,
OB*+ and OB*₊ Solidi

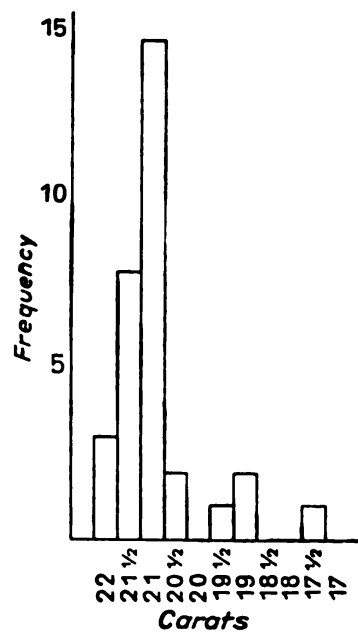


Fig. 5

The next group of coins are those with the mark in the exergue BOIK or BOIK. Only four weights have been reported for specimens of these coins in good condition. The coins were only struck during the reign of Constans II.

COIN NO.	MARK	WEIGHT
170	BOIK	4.27
171	BOIK	4.20
172	BOIK	4.30
175	BOIK	4.37

Obviously there are not enough weights for a scientific treatment, but they extend between twenty-two and twenty-three and one half carats. Two of the four recorded weights are between twenty-two and one half and twenty-three carats. The determination of the standard on which these coins were minted, however, rests most decisively on the expansion of the ligature IK or IK. One of the letters of that ligature is clearly a *kappa*, but is the other one to be read as a *pi* or a *gamma*? Numismatists have read the inscription in both ways, with a *gamma* as well as with a *pi*. It seems fairly certain that the ligature in both forms was intended to stand for a single group of two letters, and from the position of the letters BO in relation to each other the inscription is retrograde. It is also to be noted that the first retrograde exergual markings on the light weight solidi are to be found during the joint reigns of Heraclius and Heraclius Constantine and just precede the reign of Constans II. Other light weight solidi from the reign of Constans II (Coins nos. 176 and 177) have clearly discernible retrograde inscriptions, BOXX. If the ligature is read in retrograde fashion as *kappa-gamma*, it would be in conformity with the few weights that we possess and would indicate coinage issued at twenty-three siliquae. If, on the other hand, the ligature is read as *kappa-pi* in retrograde fashion the anomalous numerical value is twenty plus eighty or 100, which could only be taken to indicate coinage at 1/100th of a Roman pound. The practice of indicating the relationship of the solidus to the pound by the figure LXXII in the field is known for the Constantinian period, but 1/100th of a Roman pound is 17.28 siliquae, and all of the weights for these coins would then be

extremely high. Perhaps even more striking is the fact that since it has been shown that the inscription is retrograde, it should follow the Greek practice of arithmetical notation which *kappa-gamma* does, but which *kappa-pi* does not. The Greek letter *rho* would be used to indicate 100. In writing Greek numerals the larger number usually precedes the smaller one. The *kappa-gamma* expansion of the ligature satisfies that requirement, whereas even if we presume that the addition of eighty plus twenty (ΠΚ) was used to indicate 100 (P), which in itself would be a source of surprise, the retrograde character of the inscription would show the unusual form of twenty plus eighty (ΚΠ).¹² Only the reading ΒΟΓΚ or "twenty-three carats of gold of the Constantinopolitan standard" will satisfy the requirements, if this exergual mark is taken to be a notation of the weight or standard of the coin as seems to be indicated by the letters ΒΟ. The only other possibility is that the ligature ΠΚ stands for some phrase which is otherwise unrecognizable in relation to coins. One cannot presume the existence of such a phrase, and as a result "twenty-three carats of gold of the Constantinopolitan standard" seems fairly certain.

The third and last series of coins to be discussed from the metrological standpoint are those marked OB*+*, OB+* or BO⁺. The range of these coins is from 4.21 to 3.35 grammes, and the two coins marked OB⁺ and CO⁺ are at the lower end of the scale, but they appear to be badly worn. It seems certain that the mark CO⁺ is an error for OB⁺. The coins marked OB*+* are distributed in such fashion that it is possible that Justin II began this series somewhat above the indicated weight for the coins marked OB+*, but it hardly seems likely that there are two separate denominations so close to one another that the series of weights for the heavier one merely continues that of the lighter one. In addition, as will be shown, the measurement of deviation in the case of these coins leads to the conclusion that a single series is involved and that the individual exergual marks are simply abbreviations or fuller versions of the same mark.

¹² Leo Schindler and Gerhart Kalmann, "Byzantinische Münzstudien I. Goldmünzen unter 24 Karat von Justinian I. bis Constantine IV., "Numismatische Zeitschrift, LXXII (1947), pp. 107-112, arrived at the same conclusion because of the retrograde character, but they did not explain why they chose to read the ligature as *kappa-gamma* rather than *kappa-pi*.

In this case the coins cover only the reigns from Justinian through the joint reigns of Heraclius and Heraclius Constantine. The striking of these coins must have come to an end before 630 A.D. when Heracleonas was raised in rank. It should also be noted that the marks in the exergues are found in all forms during the reign of Justinian, but that in the reign of Justin II only OB*+* occurs and that afterwards only OB+* was used. Also the mint mark ΘS is strongly associated with these coins and only with these coins. In the reign of Justinian one of these coins is found with the mint mark Θ. After that the mint mark is always given as ΘS save for one instance where as a result of a double striking the mark is ΘSS. Certainly the obverse die of Coin no. 79 which on the reverse bears the mint mark ΘS and the exergual inscription OB*+* was used to strike another coin with the mint mark A on the reverse and the normal exergual inscription CONOB.¹³ Either one must suppose the unlikely possibility that the obverse die was sent from one *officina* or mint to another or that one mint or *officina* used used more than one mint mark for the purpose of striking coins in the name of another mint or for some other purpose. This latter suggestion would be in accord with the Jungfleisch hypothesis which was explained in the previous chapter.

COIN NO.	WEIGHT	EXERGUE	EMPEROR
50	4.21	OB*+*	Justin II
52	4.14	OB*+*	Justin II
57	4.12	OB*+*	Justin II
54	4.11	OB*+*	Justin II
1	4.11	OB*+*	Justinian
51	4.10	OB*+*	Justin II
129	4.09	OB+*	Heraclius and Heraclius Constantine
86	4.09	OB+*	Tiberius II Constantine
83	4.09	OB+*	Tiberius II Constantine
81	4.08	OB+*	Tiberius II Constantine
55	4.08	OB*+*	Justin II
114	4.07	OB+*	Phocas

¹³ See Coin no. 79a in the Catalogue under note 45.

COIN NO.	WEIGHT	EXERGUE	EMPEROR
112	4.07	OB+*	Phocas
110	4.07	OB+*	Phocas
97	4.07	OB+*	Maurice Tiberius
99	4.06	OB+*	Maurice Tiberius
93	4.06	OB+*	Maurice Tiberius
111	4.05	OB+*	Phocas
90	4.05	OB+*	Maurice Tiberius
87	4.05	OB+*	Tiberius II Constantine
95	4.04	OB+*	Maurice Tiberius
85	4.02	OB+*	Tiberius II Constantine
82	4.02	OB+*	Tiberius II Constantine
115	4.00	OB+*	Phocas
80	4.00	OB+*	Tiberius II Constantine
96	3.98	OB+*	Maurice Tiberius
79	3.95	OB*+*	Justin II and Tiberius II Constantine
68	3.90	OB*+*	Justin II
29	3.73	CO ⁺ _*	Justinian
30	3.69	OB+*	Justinian
56	3.63	OB*+*	Justin II
28	3.35	OB ⁺ _*	Justinian

$N = 32$ $w = 0.095$ $M = 4.00$ grammes $Mo = 4.03$ grammes $Mdn = 4.06$ grammes $MD = 0.01$ grammes $\sigma = 0.1702$ grammes $V = 4.255$

The measurements of central tendency fall about twenty-one siliquae (mean = 4.00 grammes; mode = 4.03 grammes; and median = 4.06 grammes), but a relatively large number of coins are twenty-one and a half siliquae or more, so the theoretical weight of these coins must be above twenty-one and a half siliquae, or the adjustment of weight for this particular series of gold coins must be assumed to have been very poor. The poor condition of some of these pieces can be seen reflected in the broad range of the weights, but the fact that the coefficient of variation is only 4.255 indicates quite clearly that the frequency table was composed of a homogeneous

group of coins in varying states of condition or wear. With this in mind, it may be stated that the coins were actually struck at twenty-one and a half carats, which, when the half carat is added to cover seigniorage and wear, as seems to be normal in the case of solidi, would yield a theoretical weight of twenty-two carats. This is in accordance with the findings of Schindler and Kalmann. Fully twenty-five of the thirty-two coins have weights falling above twenty-one and below twenty-two carats.

The theoretical and actual weights of the ninety-seven Byzantine solidi that could be discussed in terms of a frequency table have now been covered in some detail, but fifteen additional coins were earlier referred to as barbaric or not belonging to the light weight series, and in the case of nine of these coins (one of which was clipped) the weights were known. These coins were excluded because of their barbaric origin which must now be shown to be decisive. This issue is most properly argued on grounds of style, fabric, and numismatic epigraphy. The authentic Byzantine solidus is generally better modelled than the barbarian imitations and the letters of the inscription show a greater degree of care. As an example of a clearly barbarous piece Coin no. 33 may be studied. The bust of Justinian on the obverse is so poorly done and the legend is so garbelled that there can be no doubt of its origin. Close observation will show that the form of the letter *Ð* in the exergue on the reverse is western and probably Italic. The *C* in the reverse legend is sharply angular while true Byzantine solidi show a more rounded variety of *C*. On the reverse the head of the Victory is scarcely more than a slight swelling with no modelling while the wings and drapery of the same figure are scarcely more than lines, and the upper edge of the wings form a continuous arc with the upper edge of the body of the Victory. These qualities stand in sharp contrast the normal Byzantine figure on the solidus. Lastly, but by no means least important, the Victory holds a globe surmounted by a cross whereas only very rarely do the authentic light weight Byzantine solidi display the *globus cruciger* though the solidi of normal weight always show it. Stefan suggested that this coin might have been struck in Pannonia by the Lombards at some time around 560 A.D., but definitely prior to 584/85. The location of the spot where this solidus was found is unknown.

Coin no. 32 shows many of the same traits with the added feature that the eyes of the Victory are in reality rondules in annulets. For purposes of comparison 126 separate dies for obverses of authentic Byzantine solidi known from actual handling, photographs, casts, or rubbings are gathered in the plates to this volume. A total of 121 reverse dies from the same sources are also gathered there. Unfortunately three sets of die impressions have been badly mutilated and should really be excluded from this study, so that the figures are reduced to 123 and 118 respectively. The line drawings, of course, must be excluded from any such study. The peculiar exergual marks of coins no. 31, 32, 33 in the Catalogue merely confirm the conclusion arrived at from a study of the letter forms and style as compared with the authentic Byzantine pieces. Even though Coin no. 31 is only known from a line drawing and description, it is so similar to Coin no. 32 that it seems obvious that it must be barbaric as well. The exergual marks (OBX+X and OBXT) prove conclusively that they are imitations of the light weight solidi.

The light weight solidi of Justin II were also imitated as shown by six coins of that group (Coins nos. 72-77) which are known from photographs. Still a seventh may be added, if the exergual mark of Coin no. 78 may be taken as any indication. Once again, in the case of the six coins which are known from photographs, the *globus cruciger* appears on the reverse in the hand of the personified Constantinople wearing the mural crown. The authentic light weight series, it should be remembered, usually lack the cross which, however, is always present on the normal Byzantine solidi. Coin no. 75 (PLATE VI, 75) displays the garbelled inscription as well as the poor modelling which hardly stands comparison with the authentic pieces. The exergual markings (CXNXU, COX+X·, CONX+X·, CONX+CONX+X·, CONX+x, and CX+X÷) can only be composed of a combination of the normal CONOB and the light solidus markings OBXX or more likely OB*+*.¹⁴ In the matter of the coin weights and the authenticity of the coins Schindler and Kalmann have been

¹⁴ Leo Schindler and Gerhart Kalmann, "Byzantinische Münzstudien I. Goldmünzen unter 24 Karat von Justinian I. bis Constantine IV.," *Numismatische Zeitschrift*, LXXII (1947), p. 108, arrived at the same conclusion regarding these coins struck in the name of Justin II.

proven to be correct as opposed to the other authors who have accepted the views of Monneret De Villard and Friedrich Stefan.

Since the reverses of the solidi of the reign of Tiberius Constantine are distinguished from those of preceding reigns by the fact that the type is simply a cross potent on four steps, the discussion of style, not fabric, of course, largely hinges upon the obverse. Portraiture on most, if not all Byzantine coins, is conventional, and, as a result, opinions can only be expressed with greath reserve. Coins nos. 180, 181, and 182 of the reign of Tiberius Constantine with the exergual mark C+N+B, however, can be connected with Coin no. 183 of the reign of Maurice Tiberius with the same exergual mark and the reverse of the standing Victory facing front which was restored by that ruler. No reproductions of Coins nos. 181 and 182 were available, and only a very poor reproduction in a sale catalogue of 1886 could be secured for the study of the remaining coin of Tiberius Constantine with that exergual mark. Coin no. 183, however, is in the posession of the British Museum which very kindly furnished a cast of the piece and a statement of its weight, the only one available for solidi with that mark. It should be noted that though the mint mark ΘS is very strongly associated with at least one series of light weight solidi, so strongly in fact that all of the solidi of that group struck in the reign of Tiberius Constantine bear it, it is not found on solidi with the exergual mark C+N+B. The only weight available, however, is that of the coin in the British Museum which is in excellent condition but weighs only 4.04 grammes. The four coins in question are clearly of western origin, if any judgement may be made on the basis of the two reproductions available. A sharp almost incised quality of portraiture and lettering with a raised circular border is the most characteristic trait of such pieces, and it is very marked on the coins in question. In addition the letter forms are decisively western, for on the coin of Tiberius Constantine we find D \mathfrak{M} and on that of Maurice Tiberius D \mathfrak{N} . The reverse of the solidus of Maurice Tiberius also shows the western form of the long cross ending with the letter *rho*, a form which resembles a bishop's crozier with a cross bar. This piece also displays the Victory holding a *globus cruciger* which is further reason for eliminating it from the light weight series under discussion despite the fact that it does not approach the normal weight of the solidus.

This last fact, of course, is not at all decisive. From the evidence presented it may be concluded that the solidi with C+N+B are of western origin and not part of the light weight series of coins that form the subject of this book.

Before leaving these pieces, however, it should be noted that certain changes in the matter of imperial portraiture were introduced during these two reigns. Tiberius Constantine was the first of the emperors to discard the traditional helmet head-dress found on solidi showing the emperor in armor in favor of a crown surmounted by a cross while retaining the cuirass and horseman device shield. Maurice Tiberius reverted to the helmet with plume but discarded the horseman device shield which only reappeared during the reign of Constantine IV Pogonatus. He also added the imperial *fibula* with the strands of pearls suspended. This *fibula* had not been represented on solidi of the full-face front type before, but it had been shown on some of the earlier solidi and on the fractional gold coinage. Solidi of Maurice Tiberius in military dress with cuirass and horseman device shield but wearing a helmet surmounted by a cross and without the *fibula* are known both in the normal series of solidi and in the light weight group.¹⁵ Dated bronzes of the type with the cross instead of the plume occur for several years scattered throughout the reign of Maurice Tiberius, and it would therefore be unsound to regard a piece such as Coin no. 99 as an intermediate type before the revival of the helmet with plume type.

Still another solidus of Maurice Tiberius (Coin no. 90, PLATE VII, 90) must be discussed. This coin shows the authentic exergual mark OB+*, but it depicts the Victory on the reverse with a *globus cruciger* in the left hand and the weight of the solidus is 4.05 grammes. The reverse type would be sufficient for a critical examination of the coin. It is a solidus of western origin as shown by the quality of the sharp relief and the mint mark P at the end of the reverse inscription which is normally, at an earlier date, attributed to Ravenna though this piece does not appear to be of that mint. The obverse of this solidus does not seem to be of the fine caliber which is normally expected of

¹⁵ Warwick W. Wroth, *Catalogue of the Imperial Byzantine Coins in the British Museum*, I, Pl. XIX, 13. See Coin no. 99 (PLATE VIII, 99) of the Catalogue for one of the light weight solidi of this type.

solidi of this period. This is most noticeable in the drapery and on the cuirass, but it can also be seen in the helmet and face. A circular or rather semicircular ornament is found on the front of the other solidi which depict the Emperor wearing a helmet with a plume. It is most noticeably absent on this coin. These features would point towards a barbarian origin for this coin. It is, however, most difficult to decide the origin of a solidus such as this. Certain features of the gold piece are unique, but the general appearance of the coin may well be too fine to accept it as an imitation. It is probably an authentic Byzantine piece, but it certainly has some unusual features. In any event it has been included in the frequency table despite this unique character.

The last of these solidi (Coin no. 159, PLATE XII, 159) omitted from the distribution is a quite obvious barbaric imitation of a piece of Heraclius and Heraclius Constantine. In the exergue of the reverse the inscription XVOX can be read. This solidus really requires very little discussion because it is so clearly barbaric in style, inscription and over-all character.

The forms of the frequency tables have therefore been adequately justified, and the results must be considered conclusive. Solidi of twenty carats theoretical weight were issued marked OBXX or BOXX in the exergue of the reverse. Still others of twenty-two carats theoretical weight were issued marked OB $\frac{1}{2}$, OB $\frac{1}{4}$, or OB $\frac{3}{4}$. The first series was issued in the reigns of Justinian, Justin II, Maurice Tiberius, Phocas, Heraclius sole reign, Heraclius and Heraclius Constantine joint reign, Constans II, and Constantine IV Pogonatus. A gap occurs in this series during the reign of Tiberius Constantine, but this lacuna was then filled with solidi of twenty-two carats theoretical weight which had also been introduced by Justinian (see Coins nos. 1, 28, 29, and 30), but which became prominent during the reign of Justin II and continued to be struck with some frequency through the reign of Phocas. Only a single coin of that type is known for the reigns of Heraclius and Heraclius Constantine. Finally coins of approximately twenty-three carats marked BOIK were struck in the reign of Constans II. These last pieces occur only for that reign.

Solidi of reduced weight were not as rare during the sixth and seventh centuries as has usually been assumed. Bauer reports that Zograph had seen a hoard of coins and other utensils from the Dnieper

Delta, and that the hoard contained six pieces of Heraclius and one of Constans II. All of the solidi of the three emperor type were marked BOXX.¹⁶ He also tells of sixty-one gold coins found together with gold and silver utensils discovered by herdsmen in 1912 not far from Pereschtschepino. Only four of the coins had not been used in the manufacture of ornaments. Thirty-six of the coins were of the three emperor type of Heraclius, and of these only one coin had the usual CONOB marking in the exergue. Twenty-seven of these coins were marked BOXX, and it should be noted that only two obverse dies and four reverse dies were used to strike the entire twenty-seven pieces. Four separate die combinations occur because seventeen of the coins were struck with one set of dies, six with another combination, two with a third, and two with still a fourth. The same hoard from Pereschtschepino yielded eight more solidi of the three emperor type, in addition to the twenty-seven marked BOXX, which were marked BOXX+. All eight were struck from the same pair of dies, but since no examples of this type are known outside of the Soviet Union at least one more reverse die may be added to the list of die impressions studied. The same author reports that the Pereschtschepino hoard contained sixteen coins of Constans II marked BOXX struck from two obverse dies and four reverse dies. Eight were struck with one combination, five with a second pair, two with still a third set of dies, and one with a fourth.¹⁷ Some of these dies from the eastern hoards may well be represented in the plates of this monograph, but there is no certainty of this.

A close study of the solidi listed in the catalogue reveals that there are a number of die identities. Of the twenty-five sets of die impressions of Byzantine solidi of the light weight series issued by Justinian only twenty-one obverse dies and twenty reverse dies could be distinguished.¹⁸ Twenty-nine obverse and twenty-eight reverse

¹⁶ N. Bauer, "Zur byzantinischen Münzkunde des VII. Jahrhunderts," *Frankfurter Münzzeitung*, II, no. 15 (March 1931), p. 228.

¹⁷ *Ibid.*, pp. 227-229. The same author reports that a similar find of light weight solidi of Constans II was made at Novo Sandsheroovo (or Zatschepilovo) in the Government of Poltawa in 1928. No account of the dies is given.

¹⁸ The die identities were as follows: Coins nos.

5	6	7	8	9	21	23
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dies of light weight solidi of Justin II are known as well as one set of Justin II and Tiberius II Constantine.¹⁹ Of the eight light weight series coins of Tiberius Constantine alone which were studied only two were struck from the same pair of dies.²⁰ Eleven more sets of dies of this series are known for the reign of Maurice Tiberius. During the reign of Phocas seven coins were struck from three sets of dies, and the other seven coins showed no die identities.²¹ Thus there were ten separate die impressions for the obverse and ten for the reverse for the reign of Phocas. Heraclius sole reign is represented by two more sets of dies. But the joint reign of Heraclius and Heraclius Constantine presented only thirty-two authentic solidi that could be studied accurately, and three of these were too mutilated for die analysis. Twenty-seven separate obverses were recognizable as were twenty-four reverses.²² There were five specimens of the three emperor type that might be studied, and from these there was one die identity of the reverse.²³ Eight sets of dies of Constans II might be distinguished because four of the solidi of that Emperor were evidently struck from two sets of dies.²⁴ Two sets of dies of Constans II, Constantine IV Pogonatus, Heraclius and Tiberius, and two more sets of Constantine IV Pogonatus, Heraclius and Tiberius complete the series. Thus 123 obverse dies and 118 reverse dies, excluding those too mutilated for

¹⁹ The die identity was:

Coins nos. 58 59

²⁰ The die identity was:

Coins nos. 81 86

²¹ The die identities were as follows:

Coins nos. 106 107 108 109 110 112 113

²² The die identities were as follows:

Coins nos. 118 119 121 122 133 134 148 149

²³ The die identity was:

Coins nos. 162 163

²⁴ The die identities were as follows:

Coins nos. 166 167 170 171

study, can be set as a minimum figure. The obverse dies can be omitted from further calculation because as was shown in the case of Coin no. 79 the same obverse might be used for the normal solidi and for the light weight series. Light weight solidi, however, in the light of the 118 separate reverse dies known, cannot have been too rare. Even if the six reverse *ΒΟΙΚ* dies are excluded there still remain 111 dies of authentic light weight solidi which may be studied.

It is also obvious that these light weight solidi must have been well known to the barbarians. Most of the barbaric imitations from the West are imitations of the earlier phase of this coinage while the hoards from the Ukraine are sufficient to demonstrate that in the seventh century at least, light weight solidi were moving up the great eastern European rivers. Two sets of die impressions of the barbarous imitations of light weight solidi of Justinian are known. Six more for the reign of Justin II with still another for the joint reigns of Heraclius and Heraclius Constantine prove this beyond question. The meaning of the exergual mark was not clearly understood, but it was associated among the barbarians with light weight currency as shown by the weights of the imitations.²⁵ There can be no doubt of the western origin of these imitations for the characteristic features of such coinage are plainly visible. The authentic Byzantine light weight solidi, however, were struck chiefly in the East. Solidi of such undoubted eastern origin with a flat fabric such as those at the end of the series must be compared with Coin no. 22 which shows western style. This is a point of some importance which will be recalled when a solution to the riddle of these solidi is given in the last chapter.

Still one further factor regarding these coins remains to be treated. The metallic content or alloy of precious metal coinage is of importance at least equal to the weight. There is no question but that changes in the weight of coins of such widespread distribution as the solidus would be detected very rapidly as the coin changed hands. This is not as true of the alloy particularly among the western barbarians. The

²⁵ Coin no. 32 (*ΟΒΧ+Χ*) = 3.98 grammes (clipped); Coin no. 33 (*ΟΒΧΤ*) = 3.95 grammes; Coin no. 72 (*СХΝХУ*) = 3.99 grammes; Coin no. 73 (*СОХ+Χ·*) = 4.070 grammes; Coin no. 74 (*СОИХ+Χ·*) = 3.992 grammes; Coin no. 75 (*СОНХ+*) = 3.885 grammes; Coin no. 78 (*СХ+Χ÷*) = 4.05 grammes; Coin no. 159 (*ХВОХ*) = 4.002 grammes.

Byzantine government by use of the formula CONOB on its gold coinage had indicated "gold of the standard or quality of Constantinople." Jungfleisch suggested that the imperial government, however, also issued gold at less than twenty-four carats of purity, and though he gives no series of analyses to support that contention he proposes the following relationship between the exergual marks and the gold content.

EXERGUAL MARK	CARATS OF GOLD
CONOB+*	23 ³ / ₄
CONOB+	23 ¹ / ₂
CONOBA (1/30th of one percent of copper)	23 ¹ / ₄
CONOB	23
OBXX }	22 ²⁶
BOXX }	

In the time of Valentinian I the letters OB were applied to solidi to indicate that they were made of refined gold. It was also during the reign of Valentinian that the first of a series of laws required that gold payments to the imperial treasury be reduced to bullion and tested for purity as a result of the numerous forgeries of solidi that were of improper alloy.²⁷ There also seems to have been an official known as the *Comes auri* in the West whose duty it was to certify that the gold was of the proper degree of fineness.²⁸

²⁶ Marcel Jungfleisch, "Conjectures au sujet de certaines lettres isolées se rencontrent sur les solidi byzantines du VII^e siècle," *Bulletin de l'Institut d'Egypte*, XXXI (1948-49), pp. 118-119. Jungfleisch adds the perceiving comment, "Dans la pratique, des titres aussi élevés étaient rarements atteints. En général, la pierre de touche indique au moins un demi-carat (et même davantage) en dessous du chiffre théorique. Les degrés de pureté de l'or n'étant plus strictement observés, l'adoption de cette échelle compliquée aurait abouti en fait à masquer un abaissement du Standard CONOB; les pièces du plus bas titre auraient été destinées à l'exportation? Les analyses et la rencontre fortuite d'un texte pourraient seules trancher ces questions."

²⁷ C. Th., XII, 6, 12; 6, 13; 7, 3, all of 366/7 A.D. See Chapter I, note 22.

²⁸ *Notitia dignitatum occidentalis*, X, 6 (ed. Seeck, p. 148). This official is not mentioned in the *Notitia dignitatum orientalis*, but some gold bars from Sirmium are marked LVCIANVS·OBR·I·SIG. E. Babelon, *Traité des monnaies grecques et romaines* (Paris, 1901), I, pt. I, col. 883. Some later Roman annotations to Probus the Grammarian speak of the *comicia obriciaca* and *comitia obridiaca*. *Grammatici Latini*, ed. G. H. T. Keil (Leipzig, 1857-74), IV, p. 305.

Thus the literary evidence that the Byzantine government took cognizance of solidi of less than the proper alloy is decisive. But imitations of gold could also be produced that were difficult to detect. Procopius speaks of the bronze (χαλκός) equestrian statue of Justinian in the Augusteum at Constantinople and says that this brass was softer in color than pure gold and was valued not much below an equivalent weight of silver.²⁹ It was probably bronze of this sort which was used in the production of counterfeits such as those of gilded copper (*aereum deauratum*) with which Clovis bribed the *leudes* of Ragnacher.³⁰ The fraud was only discovered sometime later, after the damage had already been done. Nor is this the only example of such a fraud perpetrated upon supposedly intelligent people during the early years of the Byzantine Empire. In a later passage Gregory of Tours tells of the Saxons paying many thousand pieces of gold to King Guntram for the privilege of crossing the Rhone. Having crossed the Rhone, the Saxons came into Auvergne in the springtime, and there they produced, instead of gold, stamped bars of bronze (*regulae aeris incisae pro auro*). The people who saw these bars did not doubt that they were tested and proven gold because of the fine color that had been given to the metal by some clever process. Many persons were tricked by this device and gave their good money for the bronze and were reduced to poverty.³¹ This bronze is very reminiscent of the equestrian statue of Justinian.

The fact that the Dortmund hoard contained pale colored coins of what was apparently bad alloy confirms that such poor coinage

Also see H. Willers, "Römische Silberbarren mit Stempeln," *Numismatische Zeitschrift*, XXX (1898), pp. 228 ff.; and "Nochmals die Silberbarren nebst COMOB," *Numismatische Zeitschrift*, XXXI (1899), pp. 35 ff.; A. Evans, "Notes on Coinage and Currency in Roman Britain from Valentinian I to Constantine III," *Numismatic Chronicle*, Series 4, XV (1915), pp. 490 ff.; F. Kenner, "Römische Goldbarren mit Stempeln," *Numismatische Zeitschrift*, XX (1888), pp. 19 ff. The literature on the meaning of OB is quite extensive.
²⁹ Procopius, *De Aedificiis*, I, ii, 4 (ed. Teubner, III, pt. II, pp. 1718 f.). Cf. Mommsen, *Histoire de la monnaie romaine*, trans. Duc. de Blacas (Paris, 1873) III, p. 47, note 1.

³⁰ Gregory of Tours, *Historia Francorum*, II, 42 (MGH., *Scriptores rerum merovingicarum*, I, p. 105). These are quite different from the poor alloy coins of the Dortmund hoard.

³¹ *Ibid.*, IV, 42 (MGH., *Scriptores rerum merovingicarum*, I, p. 177). He uses the words *aurum probatum* in the course of this narrative.

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passed in the West. Plated coins were known to have been struck in the names of several rulers of the later fourth century.³² Such coins were most probably forgeries because the debasement of gold was specifically prohibited by the Emperor Tacitus, and proscriptions against it are contained in the *Digest*.³³ Many decrees refer to the counterfeiting of solidi, and several of these use the phrase *adulterina nomismata* or the like.³⁴ Clearly it was against the interests of the Byzantine state to have such debased solidi circulate within the

³² Mommsen, *Histoire de la monnaie romaine*, trans. Duc. de Blacas, III, pp. 67–8, and especially p. 68, notes 2 and 3, points out that such coins are known for Valentinian the Younger, for Gratian (A. von Rauch, "Ueber die römischen Silbermünzen und den innern Werth derselben. Ein Beitrag zu den ältern metrologischen Untersuchungen," *Mittheilungen der numismatischen Gesellschaft in Berlin*, III (1857), p. 288), and for Arcadius. The last coin has a core of silver. The Cleeve's hoard (fourth century), which is now lost, contained some gilded copper coins. Cf. B. H. St. J. O'Neil, "The Cleeve Prior Hoard of 1811," *Numismatic Chronicle*, Series 5, XVI (1936), pp. 314–316, on this hoard. Many poor alloy coins have been mentioned in the secondary literature, e.g., Warwick W. Wroth, *Catalogue of the Imperial Byzantine Coins in the British Museum*, Justin I, nos. 6 and 10.

³³ Vopiscus, *Tacitus*, IX, in the *Scriptores Historiae Augustae. Digest*, 48, 13, 1, which deals with the *Lex Iulia Peculatus* is the passage referred to above. It is equivalent to *Basilika*, LX, 45, 2. Cf. Babelon, *Traité des monnaies grecques et romaines*, I, pt. I, cols. 536–7, where *C. Th.*, XII, 6, 12; 7, 13; and 13, 4, are cited.

³⁴ *C. Th.*, IX, 21, 1 (ed. Mommsen and Meyer, I, pt. II, p. 471). This law is actually dated in 319 A.D., but Mommsen on the basis of the variants in *C. Th.*, II, 19, 1, which is apparently joined to it, dates it as of 323/5 A.D. *C. Th.*, IX, 21, 3 (ed. Mommsen and Meyer, I, pt. II, p. 472), and *C. Th.*, IX, 21, 5 (ed. Mommsen and Meyer, I, pt. II, p. 473), also refer to this. These last two passage must refer to gold because they are included in *C. Just.*, IX, 24, 2, which is dated in 326. These laws set forth the punishments for counterfeiting debased solidi. *C. Th.*, IX, 22, 1 (ed. Mommsen and Meyer, I, pt. II, pp. 474–5), sets forth the penalty for substituting debased solidi for good ones in commercial transactions. This law is dated in 317 A.D., but this should be corrected to 343 A.D. Mommsen, *ad loc.*; and O. Seeck, "Die Münzpolitik Diocletians und seiner Nachfolger," *Zeitschrift für Numismatik*, XVII (1890), p. 51, note 3. By 367 A.D. *C. Th.*, XII, 6, 13, was issued. Cf. Symmachus, *Epistolae*, X, 2 (*MGH.*, *AA.*, VI, p. 278): "*flandae monetas nequitiam decoquit larga purgatio, nullo iam provincialis auri incremento trutinam spectator inclinet.*" The late fifth century Syrian *Law Book* also gives a penalty for imitating gold coined in the emperor's image. *Syrisch-römisches Rechtsbuch aus dem fünften Jahrhundert*, ed. Bruns and Sachau (Leipzig, 1880), R. II, 147 (Vol. I, p. 129). This is dated 457/74? It is, however, the common law against counterfeiting which is contained in almost all codes.

empire, but there can be no question but that they did circulate in the West. In 458 A.D. the Emperor Majorian issued a *Novella* which has already been cited in connection with the work done by Monneret De Villard and Blanchet: *Praetera nullus solidum integri ponderis calumniosae improbationes obtentu recuset exactor, excepto eo Gallico, cuius aurum minore aestimatione taxatur; omnia concussionum removeatur occasio.*³⁵

This passage can only be taken as referring to Gallic *solidi* of full weight (*integri ponderis*) which were of less value because of poor alloy. *Solidi* which were not of full weight did not fall under the provisions of this law, and the phrase *cuius aurum minore aestimatione taxatur* must be taken as referring to the alloy.³⁶ *Solidi* of improper gold alloy were circulating in Gaul in sufficient quantity so that the imperial government took cognizance of the fact in its laws. This is undeniable.

In addition to the passages already cited and the debased *solidi* which were mentioned, a barbarian law code contains a passage which is most easily interpreted as referring to such debased gold coinage. The Burgundian Code includes such a passage which has excited much comment: *De monetis solidorum [iubemus] custodire, ut omne aurum, quodcumque pensaverit, accipiat praeter quattuor tantum monetas, hoc est: Valentiani (Valentiniani in another MS.) Genavensis prioris et Gotici qui a tempore Alarici regis adaerati sunt et Ardaricianos. Quod si*

³⁵ *Nov. Maioriani*, VII, 1, 14 (ed. Mommsen and Meyer, *Codex Theodosianus*, III, p. 171). Ewald and Hartmann, *MGH., Epistolae*, I, p. 191; Prou, *Catalogue des monnaies françaises de la Bibliothèque Nationale. Les Monnaies mérovingiennes* (Paris, 1892), p. XVI; E. Babelon, "La Siliqua romaine, le sou et le denier de la loi des Francs Saliens," *Journal des Savants*, Février 1901, p. 120, note 1, as well as Monneret De Villard, as shown in the first chapter, believe that this *Novella* referred to a lighter weight of coinage. H. Brunner, *Deutsche Rechtsgeschichte* (2nd edition: Leipzig, 1906), I, p. 312, note 3, says, "Die Vorschrift Majorians von 458 . . . bezieht sich nur auf eine einzelne Art gallischer *Solidi* unbekannter Provenienz und dann kann zur Erklärung der altsalischen Münzreform um so weniger herangezogen werden, als die ältesten Goldmünzen der fränkischen Zeit vollwichtig ausgeprägt sind." This was, of course, written much earlier than the article by Blanchet.

³⁶ Adrien Blanchet, "Les ((sous Gaulois)) du Ve siècle," *Le Moyen Age*, 2^e série, XIV (1910), pp. 45-48, interpreted this *Novella* as referring to coins such as the pale gold *solidi* found in the Dortmund hoard. Cf. Wilhelm Kubitschek, "Zum Goldfund von Dortmund," *Numismatische Zeitschrift*, neue Folge III (1910), pp. 56-61. See Chapter I, note 18.

*quicumque praeter istas quattuor monetas aurum pensantem non acceperit, id quod vendere volebat, non accepto pretio perdat.*³⁷

The date of this passage has been a matter of some dispute among the various editors, but it is sufficient for our purposes to point out that it cannot be later than 534 A.D., which year witnessed the extinction of the independent Burgundian kingdom. De Salis has dated it in the first years of Godomar, the last Burgundian king, who ascended the throne in 524 A.D.³⁸ This passage, however, says that all solidi regardless of weight are to be accepted except four groups which are specifically excluded. The four groups of solidi excluded are clearly not omitted from the law by reason of weight but for some other cause. This other cause can only be the purity of the metal.

The first class of such solidi barred from usage are those called *Valentiani* or *Valentiniani*, depending upon the reading. Here it should be recalled that it was during the reign of Valentinian I, in 366/7 A.D., that it was ordered by imperial decree that all solidi submitted to the Fiscus be melted down so that the metal could be tested for purity. The number of so-called adulterated coins in circulation required drastic measures. At the same time, in the *Notitia dignitatum occidentalis*, the *Comes auri* was recorded as an official of the Empire in the West. Imperial solidi began to be marked OB to signify the purity of the metal. Indeed the coins themselves bear out the literary evidence. In the Dortmund hoard certain pale gold imitations of Byzantine solidi occur.³⁹ These coins of pale gold,

³⁷ *Leges Burgundionum, Constitutiones Extravagantes*, XXI, 7 (ed. de Salis, MGH., *Leges*, Sectio I, II, pt. I, pp. 120–1). Bluhme did an earlier edition in the folio section (MGH., *Legum*, III, p. 576). P. Le Gentilhomme, "Le Monnayage et la circulation monétaire dans les royaumes barbares en occident (V^e–VIII^e siècle)," *Revue numismatique*, 5^e série, VI (1942), p. 107, note 28, says of this passage, "Il n'a jamais été remarqué que ce texte ordonne de recevoir les sous d'or, quel que puisse en être le poids, c'est-à-dire qu'il s'agisse de sous de 24 siliques ou de sous réduits, comme les sous d'Anastase de 3 gr. 80 et de 3 gr. 90 qui figurent dans la trouvaille de Chinon à côté de sous pesant le plus souvent 4 gr. 40."

³⁸ MGH., *Leges*, Sectio I, II, pt. I, p. 119, note 5. Other authorities, including Bluhme in his edition, date it in the reign of Gundobad. Cf. Richard Schröder, *Lehrbuch der deutschen Rechtsgeschichte* (6th ed.: rev. by E. Frh. v. Künssberg: Berlin + Leipzig, 1922), pp. 256–257; Brunner, *Deutsche Rechtsgeschichte*, I, p. 504.

³⁹ K. Regling, *Der Dortmunder Fund römischer Goldmünzen* (Dortmund, 1908), p. 20, and nos. 30, 134, 135, 188, 193–196, 235, and 272, cited by Blanchet, "Les

however, have a weight not below 4.30 grammes and thus fall within the range of the solidus. They occur most numerous struck in the names of Valentinian I and Valens, but are also known bearing the name of Magnentius and Valentinian II. They are clearly barbaric imitations of the coins of those rulers. The mint marks are those of Lyons and Treves. Dortmund, where they were found, is not very far from the Rhine, so that it is likely that these strange pieces could have passed up and down the Rhine Valley and across the Rhine into the fourth century Empire and even into the later Burgundian realm to be memorialized in the manner that has been set forth.

These pieces are clearly not the products of an official mint of the Empire. The style is much inferior to the imperial coinage of the period. In at least one instance the obverse die of a solidus, bearing the name of Valentinian, mint marked Lugdunum was used to strike another imitation with a reverse borrowed from the types struck at Thessalonica. One solidus of Gratian is marked TRPS in the exergue. This mint mark indicates pure silver of the Treveran mint and cannot possible have been an error of an official moneyer.⁴⁰ Blanchet would attribute these pale gold solidi to the Germanic peoples across the Rhine, most probably the Alemanni. There is no evidence to support this aside from the site of the Dortmund hoard which is not in itself conclusive. It might well be that the coins are the result of native Gallo-Roman forgers.

The coins of Valentinian I (364–375 A.D.) are in no sense underweight as compared with solidi of other regions, and it seems fairly certain that the explanation given above is the correct one. In the

((sous Gaulois)) du V^e siècle," *Le Moyen Age*, 2^e série, XIV (1910), p. 46, note 3. Blanchet in a rather full discussion of these solidi never mentions this passage in the Burgundian Code. Also see P. Le Gentilhomme, "Le Monnayage et la circulation monétaire dans les royaumes barbares en occident (V^e–VIII^e siècle)," *Revue numismatique*, 5^e série, VII (1943), p. 58. Another pale gold imitation solidus of Valentinian I weighing 4.00 grammes was found in the Ellerbeck hoard, fourteen kilometers east of Osnabrück. K. Kennepohl, "Der Ellerbecker Goldfund," *Blätter für Münzfreunde*, LXVIII, Nr. 6 (June 1933), p. 659, no. 24, Pl. 395, no. 24.

⁴⁰ This entire description is based on Blanchet, "Les ((sous Gaulois)) du V^e siècle," *Le Moyen Age*, 2^e série, XIV (1910), pp. 46–47. The coin marked TRPS is in Regling, *Der Dortmunder Fund römischer Goldmünzen*, p. 19, and no. 235.

Dortmund hoard 112 solidi of this Emperor have a total weight of 494.73 grammes, and, therefore, an average weight of 4.42 grammes. In the Weber Collection five solidi (nos. 2719, 2722, 2724, 2726, and 2729) have weights of 4.47, 4.46, 4.48, 4.40, and 4.41 grammes respectively.⁴¹ In the case of Valens (364–378 A.D.) forty-seven solidi in the Dortmund hoard, four of which are barbarian pale gold coins, have a total weight of 207.84 grammes and, therefore, an average weight of 4.42 grammes. The Weber Collection (nos. 2732, 2737, 2739, and 2743) solidi have weights of 4.46, 4.48, 4.44, and 4.45 grammes respectively.⁴² In the case of Valentinian II (375–392 A.D.) forty-four solidi of the Dortmund hoard have a total weight of 195.35 grammes and an average weight of 4.44 grammes. The Weber Collection (nos. 2760, 2761, 2763, and 2767) solidi weigh 4.46, 4.30, 4.50, and 4.53 grammes respectively.⁴³ The Dortmund hoard is of no use for the weights of the solidi of Valentinian III (425–455 A.D.). The Weber Collection solidi (nos. 2823, and 2826) have weights of 4.40 and 4.48 grammes. A hoard of fourth and fifth century solidi found near Rome contained seven coins of Valentinian III of which the maximum weight was 4.51 grammes and the average weight 4.38 grammes.⁴⁴

⁴¹ Luschin von Ebengreuth, "Der Denar der Lex Salica," *Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften in Wien*, Phil.-hist. Klasse, CLXIII (1910), Abh. 4, p. 65. In addition Weber Coll. no. 2725 is a tremissis of 1.65 grammes which corresponds to the normal weight for this period.

⁴² Luschin von Ebengreuth, *op. cit.*, p. 65. In addition two coins of the Weber Collection (nos. 2735 and 2740) have weights of 1.88 and 1.66 grammes respectively. The first is probably a heavy tremissis while the second has the proper weight for that denomination at that time. The pale gold coins of the Dortmund hoard are numbers 193–196 with weights of 4.55, 4.51, 4.36, and 4.31 grammes respectively.

⁴³ Luschin von Ebengreuth, *loc. cit.* A tremissis in the Weber Collection (no. 2765) has a weight of 1.48 grammes. This is the correct weight for such a coin. Cf. Luschin von Ebengreuth, *op. cit.*, pp. 72–3.

⁴⁴ Luschin von Ebengreuth, *op. cit.*, p. 68. Weber Collection fractional gold pieces (nos. 2825 and 2827) weigh 2.06 and 1.43 grammes. These are normal weights for the semissis and tremissis. The hoard from Rome is reported by Giacomo Boni, "Nuove scoperte nella città e nel suburbio," *Notizie degli scavi di antichità*, 1899, pp. 327 ff. and esp. p. 330. This hoard contained 397 coins with a total weight of 1.778 kilograms. The theoretical weight of this number of coins is 1.806 kilograms. The deviation from the legal weight is insufficient to indicate any lightening of the coins. P. Le Gentilhomme, "Le Monnayage et la circulation monétaire dans les royaumes barbares en occident (Ve–VIII^e siècle)," *Revue numismatique*, 5^e série, VI (1942), p. 25, places most of the

Other suggestions have been made in explanation of the passage cited from the Burgundian Code. Thus, for example, Keary would propose that *Valentiani* is to be taken as indicative of coins struck in the town of Valence.⁴⁵ This passage does mention those coins known as *Genavensis prioris*, but this is not indicative of the fact that the other coins mentioned are also described by the mint. Indeed those called *Gotici* quite obviously are not thus denominated. Furthermore, the Frankish mint of Valence was not opened before the late sixth century, and the mint of that name in Spain was opened by the Visigothic rulers Suintila (621–631 A.D.), Chintila (636–640 A.D.), and Egica (687–700 A.D.), all of whom lived long after the promulgation of this law.⁴⁶ Only the explanation suggested above seems to fit the facts.

The second group of solidi, denominated as *Genavensis prioris*, present a seemingly insoluble problem. None of the variants in the manuscripts are of any aid save for the fact that the word *prioris* may not have occurred in the original text. This word *prioris* has been taken by Bluhme to signify a group of coins which were supposedly struck by Godegiselus, the brother of Gundobad.⁴⁷ But the Burgundian coinage, as far as can be determined, began only during the reign of Gundobad which, for the most part, follows that of Godegiselus. This explanation is clearly unsatisfactory. If the Burgundian coinage is post imitations of solidi of Valentinian III in the second half of the fifth century because they are imitations of a type which Babelon believed commemorated the defeat of Attila at Châlons in 451 and his retreat from Italy in 452.

⁴⁵ C. F. Keary, *The Coinages of Western Europe from the Fall of the Western Empire under Honorius to its Reconstruction under Charles the Great* (London, 1879), p. 67. Cf. A. Soetbeer, "Beiträge zur Geschichte des Geld- und Münzwesens in Deutschland," *Forschungen zur deutschen Geschichte*, I (1862), p. 286. Also see Bluhme's comments in his edition of this code, *ad loc.* De Salis, in his edition, *ad loc.*, says, "*Sunt solidi in Valentia urbe signati. Lectio VALENTIANI, quam A3 exhibet, recipi non potest, cum non traditum, ab aliquo imperatorum, qui hoc nomine appellati sunt, monetas minoris pretii esse signatas.*"

⁴⁶ A. Engel and R. Serrure, *Traité de numismatique du moyen âge* (Paris, 1891), I, p. 53. The Visigothic mint of Valentia was located in the province of Tarraconensis and is modern Valencia. The attempted identification of a Visigothic mint of Valence in the Dauphiné (*Dépt. Drome*) rests upon forgeries. George C. Miles, *The Coinage of the Visigoths of Spain. Leovigild to Achila, Hispanic Numismatic Series II* (New York: The American Numismatic Society, 1952), pp. 89–91, and 455–6. Cf. M. Prou, *Les monnaies mérovingiennes*, Nos. 1352–1357.

⁴⁷ Bluhme in *MGH., Legum*, III, p. 576, *ad loc.* Cf. Soetbeer, "Beiträge zur Geschichte des Geld- und Münzwesens in Deutschland," *Forschungen zur deutschen Geschichte*, I (1862), p. 288.

500 A.D. in origin, then this passage can hardly refer to native currency, and the word *prioris* should be part of the text.⁴⁸ The only explanation which might have some grain of truth in it is that of Keary. That author suggests that in the payment of taxes in the early Middle Ages the specie that was collected was often brought to the local moneyer who minted it with the distinctive mark of the town.⁴⁹ Possibly the town of Geneva was noted for the poor alloy of the coins struck there. This cannot be proved, and no Visigothic or Roman coins of Geneva are known, but no other explanation will fit. Some Genevan coins are attributed to the Frankish period which is later.⁵⁰ The meaning in this case still remains uncertain.

The third group of solidi are the *Gotici, qui a tempore Alarici regis adaerati sunt*. A letter of St. Avitus, of the year 509 A.D., supports the contention that the passage refers to adulterated or debased coinage and specifically mentions the Gothic king, who must be Alaric II, who had very recently adulterated the coinage.⁵¹

The last of those solidi which are unacceptable are those called *Ardariciani*. This single word has excited more comment than any other in the entire decree. Bluhme would suggest that the coins of

⁴⁸ Engel and Serrure, *Traité de numismatique du moyen âge*, I, p. 37, mention no coins of Godegiselus. They maintain that the Burgundian coinage began in 500 A.D., and that was the last year of Godegiselus. Cf. P. Le Gentilhomme, "Le Monnayage et la circulation monétaire dans les royaumes barbares en occident (Ve–VIII^e siècle)," *Revue numismatique*, 5^e série, VII (1943), pp. 92–95.

⁴⁹ C. F. Keary, *The Coinages of Western Europe from the Fall of the Western Empire under Honorius to Its Reconstruction under Charles the Great*, pp. 67–8.

⁵⁰ Engel and Serrure, *Traité de numismatique du moyen âge*, I, pp. 50 ff. Prou, *Les Monnaies mérovingiennes*, nos. 1329 (1.31 grammes); 1330 (1.17 grammes); 1331 (1.34 grammes); 1332 (1.25 grammes); 1333 (1.19 grammes).

⁵¹ St. Avitus, *Epistolae*, LXXXVII (MGH., AA., VI, p. 96). "*Nec quidem talis electri, quale nuper, ut egomet hausit, in sancto ac sincerissimo impollutae manus nitore sordebat, cui corruptam potius quam confectam auri nondum fornace decocti crederes inesse mixturam: vel illam certe, quam nuperrime rex Getarum secuturæ praesagam ruinae monetis publicis adulterium firmansem mandaverat.*" A. Blanchet and A. Dieudonné, *Manuel de numismatique française* (Paris, 1912), I, p. 186, cite *Leges Wisigothorum*, VII, 6, 5 (MGH., *Leges*, Sectio I, I, p. 311), as supporting this passage from the letters of St. Avitus. Actually it is merely a requirement that solidi of full weight and good gold be accepted by all. Cf. *Leges Wisigothorum*, VII, 6, 2, which prohibits adulteration. Alaric II ruled at Toulouse between 484 and 507 A.D. Cf. Wilhelm Reinhart, "Die Münzen des Westgotischen Reiches von Toledo," *Deutsches Jahrbuch für Numismatik*, III–IV (1940–41), pp. 74–84.

Aduris or Aturis, the town in which the *Breviary* of Alaric was issued, are meant.⁵² A difficulty arises in this connection, however, for no Visigothic mint beginning with the letter A, let alone Aturis or Aduris, which is not listed at all, occurs before the reign of Reccared (586–601).⁵³ A gold triens of the proper weight struck by the Frankish moneyer Bautharius, which cannot be dated, does bear the mint mark **ATVRRE**. This town of Aturre has been identified with Aire in the *Département de Landes*.⁵⁴ This *Département* is in southwestern France and might well come within the scope of the legislator of this Burgundian constitution because of commercial connections. Still the evidence is insufficient to permit of certainty.

Charles Lenormant has proposed an emendation of the text so that the last group of solidi would be called *Armoricani*.⁵⁵ Numismatists have quite properly been wary of accepting such an emendation. The coin on which Lenormant reads the monogram for *Armoricani* should most likely be expanded as *Amalaric*, the Visigothic King.⁵⁶ There is no proof at all for the view that Armorica at this time issued currency in imitation of the imperial gold.⁵⁷ On the other hand it is

⁵² Bluhme in *MGH., Legum*, III, p. 576, *ad loc.* Cf. de Salis, *MGH., Leges*, Sectio I, II, pt. I, *ad loc.*, who misinterprets the passage from St. Avitus and says, "*Alaricum regem Visigothorum in eo reprehendit [Avitus episcopus], quod monetas inferioris ponderis signandas curassit*" He suggests that *Atalaricianos* be used as an emendation. Coins of Athalaric the Ostrogoth would then be involved, but there is no evidence to suggest that Athalaric issued any coins of pale gold.

⁵³ See George C. Miles, *The Coinage of the Visigoths of Spain. Leovigild to Achila*, p. 72. Cf. Engel and Serrure, *Traité de numismatique du moyen âge*, I, pp. 50 ff.

⁵⁴ This coin is listed as of a mint of an unidentified location by Prou, *Les Monnaies mérovingiennes*, no. 2494, and weighs 1.30 grammes. Engel and Serrure, *Traité de numismatique du moyen âge*, I, p. 121, have identified the town as Aire.

⁵⁵ Charles Lenormant, "Lettres à M. de Saulcy sur les plus anciens monuments numismatiques de la série mérovingiennes V," *Revue numismatique*, XIV (1849), pp. 17–39.

⁵⁶ Keary, *The Coinages of Western Europe from the Fall of the Western Empire under Honorius to Its Reconstruction under Charles the Great*, p. 67, and J. de Pétigny, "Monnayage de la Gaule au milieu du VI^e siècle de 536 à 560," *Revue numismatique*, XVII (1852), pp. 130–134, argue against Lenormant. Also see Wilhelm Reinhart, "Die Münzen des Westgothischen Reiches von Toledo," *Deutsches Jahrbuch für Numismatik*, III–IV (1940–41), pp. 74–84, who discussed the entire problem of the Visigothic coinage prior to Leovigild. Soetbeer, "Beiträge zur Geschichte des Geld- und Münzwesens in Deutschland," *Forschungen zur deutschen Geschichte*, I, p. 288, accepts Lenormant's view.

⁵⁷ Blanchet and Dieudonné, *Manuel de numismatique française*, I, p. 185.

perfectly conceivable that if an emendation were made it should be the name of some Germanic king. Valesius has suggested a king of the Gepidae, but this is most unlikely in view of the scant knowledge concerning that relatively minor tribe of which we have no definitely identifiable currency. The suggestion of *Alaricanos*, i.e., Alaric II, is militated against by the fact that his coins are included in an earlier group.⁵⁸ Coins of Amalaric, the Visigoth, who was approximately contemporary with this constitution, however, are known, and it would seem possible to emend the text to include his name. There is indeed a letter written by Cassiodorus in which the moneyers of Spain are accused of having made private profits out of the coinage even though they were originally in the service of the state.⁵⁹ This letter has been dated by the editors to the period 523–526 A.D., and it may be that coins of bad alloy were issued at that time. The difficulty lies in the fact that insufficient evidence regarding the nature of some of the barbaric imitations is available. Valid results cannot be expected until a sufficient quantity of analyses of the barbarian imitative gold coinages is published.

In the light of this situation in the West the conclusion drawn by Jungfleisch and the analyses of the light weight solidi must be judged. Mr. Philip Grierson very kindly has furnished the results of specific gravity analyses of the light weight solidi in his collection:

1. Coin no. 8, in exergue OBXX, struck for Justinian

Weight in Air	Weight in Water	Density	Fineness	Carats
3.7184 grammes	3.5020 grammes	17.5	87%	21
2. Coin no. 22, in exergue ODX, struck for Justinian

Weight in Air	Weight in Water	Density	Fineness	Carats
3.5843 grammes	3.3784 grammes	17.4	86%	20.5 ⁶⁰
3. Coin no. 93, in exergue OB+*, struck for Maurice Tiberius

Weight in Air	Weight in Water	Density	Fineness	Carats
4.0617 grammes	3.8306 grammes	17.6	88%	21

⁵⁸ Ed. de Salis, *Leges Burgundionum* (MGH., *Leges*, Sectio I, II, pt. I), *ad loc.* lists the various suggestions and authors.

⁵⁹ Cassiodorus, *Variarum*, V, 39 (MGH., *AA.*, XII, p. 165): "*Monetarius autem quos specialiter in usum publicum constat inventos, in privatorum didicimus transisse compendium. Qua praesumptione sublata pro virium qualitate functionibus publicis applicentur.*" This letter is addressed to Ampelius, *vir illustris*, and Liverio, *vir spectabilis*.

⁶⁰ This coin is slightly clipped.

4. Coin no. 129, in exergue OB+*, struck for Heraclius and Heraclius Constantine

Weight in Air	Weight in Water	Density	Fineness	Carats
4.0936 grammes	3.8619 grammes	17.7	88.5%	21

5. Coin no. 176, in exergue OBXX, struck for Constans II, Constantine IV Pogonatus, Heraclius and Tiberius

Weight in Air	Weight in Water	Density	Fineness	Carats
3.6613 grammes	3.4493 grammes	17.7	88.5%	21

These are the only five coins of the light weight solidi that have been analyzed, but because of the remarkable agreement in the results it would appear to be a safe conclusion that the metallic content of these coins as a whole is only approximately eighty-eight percent fine. This would have the effect of further lowering the intrinsic value of these coins though it is not distinguishable to the naked eye. The debased coins mentioned in the various passages cited may well have been of the same variety in that they were not readily detected by the naked eye and were therefore referred to as entire groups.

Unfortunately numismatists have not made many analyses of gold imitations of imperial coins. Chemical or spectroscopic analysis would necessitate damage to the coin. The specific gravity technique which is surprisingly accurate for binary alloys of gold requires expertness. It can yield very fine results, but a good deal of patience and experience is a prerequisite. For objects of high gold content it can be considered reliable.⁶¹ Newer methods involving the use of X-rays are also available, but, of course, this requires the services of a technician. The published results of analyses of Byzantine gold during the period in question, on the basis of all of the techniques, would seem to indicate fineness generally above ninety-five percent. This makes it quite obvious that the light weight solidi were deliberately debased to a limited degree so that detection was extremely difficult, if not virtually impossible, in the early mediaeval world.

⁶¹ See Earl R. Caley, "Validity of the Specific Gravity Method for the Determination of the Fineness of Gold Objects," *The Ohio Journal of Science*, XLIX, No. 2 (March 1949), pp. 73-82; Earl R. Caley, "Estimation of Composition of Ancient Metal Objects. Utility of Specific Gravity Measurements," *Analytical Chemistry*, XXIV (April 1952), pp. 676-681. Caley gives somewhat different values for the fineness for these densities.

FINDS, HOARDS AND MINTS

Coins are essentially articles of commerce, and the area within which they circulate is vital information to any understanding of their significance for historical research. This area can be delineated in the case of ancient coins on the basis of the locations of stray finds and hoards as well as imitative copies. The area within which imitations of a specific series are known to have been manufactured must have been in commercial contact with the locality which produced the original pieces. The light weight solidi provide a case in point of particular importance.

A table of finds of light weight solidi and imitations of that series presents some rather startling features. The imitative pieces can be considered together with the authentic coins for the moment. (See pages 80—81.)

Actually the hoards from the Dnieper Delta and Pereschtschepino contained coins of both Constans II and the three emperor type of Heraclius. Thus only twenty-three separate localities are known where light weight solidi or imitations of those solidi occur. In the overwhelming majority of the cases the find spot was clearly in an area removed from effective Roman control.

The coins from Udine and Cividale were from funerary deposits found in Lombard graves in those areas which antedate the inauguration of the national coinage of the Lombards in 584/85 A.D.¹ They may, however, be treated together with the hoards from Hoischhügel and Munningen. The hoard found at Hoischhügel on the southern border of Carinthia in the neighborhood of the railroad station of Thörl-Maglern is probably roughly contemporary with the

¹ Friedrich Stefan, "Der Münzfund von Maglern-Thörl (vergraben um 570/71 bis 584/85) und die Frage der reduzierten Solidi," *Numismatische Zeitschrift*, LXX (1937), pp. 56—58. Cf. Joachim Werner, *Münzdatierte austrasische Grabfunde* (Berlin and Leipzig: Walter de Gruyter & Co., 1935), p. 41 in ed. Hans Zeiss, *Germanische Denkmäler der Völkerwanderungszeit*, III, issued by the Römisch-Germanische Kommission des Archäologischen Instituts des Deutschen Reiches, where further references to publications concerning these sites are given.

two Lombard graves. A barbarian imitation of a solidus of Justin II, which is the latest coin in the hoard, and the absence of any coins of later Byzantine emperors or Lombard coins of the national variety aids in the dating of the find. The most probable date is sometime between 570/71 and 584/85.² None of the coins had been used in the manufacture of jewellery, and it seems fairly obvious that it was simply a hoard of circulating medium.³

At Munningen, near Nördlingen, Bayrisch-Schwaben, a necropolis of about forty graves was discovered, and in the first of the graves a hoard of gold coins associated with a relatively long lance head, a small knife and a simple oval buckle was recovered.⁴ These latter objects are of little aid in dating the funerary deposit, and, as a result, the coins are used for that purpose. Nine gold coins, eight of which are of clearly barbaric origin, were recovered. A solidus of Tiberius II Constantine was the only authentic Byzantine piece in the hoard. Thus the hoard cannot have been buried prior to 578 A.D. Numismatists have maintained that some of the barbarian imitations are even slightly later in date, so that the burial must be placed in the late sixth or very early seventh century, but the imitation of a solidus of Justin II marked CONX+ is probably somewhat earlier in date of manufacture. The composition of the deposit is such that it, as well as that of Hoischhügel, probably represents the currency that was in use in that area during the late sixth and early seventh centuries.

These four finds can serve as direct proof that the light weight solidi were in circulation and were well enough known among the barbarians at that early date to give rise to a series of imitations. At

² On this hoard see Friedrich Stefan, "Der Münzfund von Maglern-Thörl (vergraben um 570/71 bis 584/85) und die Frage der reduzierten Solidi," *Numismatische Zeitschrift*, LXX (1937), pp. 43-63.

³ *Ibid.*, p. 47. Stefan goes so far as to suggest that the presence of what he describes as Lombard imitations of the Exarchate of Ravenna coinages of Justinian and Justin II as the latest coins in the hoard indicates that the hoard was not buried as a result of war. This conclusion does not seem to be a necessary one.

⁴ Werner, *Münzdatierte austrasische Grabfunde*, p. 89, lists the contents of this hoard and gives the references to the literature regarding it. To his bibliography should be added the article of Dr. Julius Cahn, "Ein Goldmünzenfund des frühen 7. Jahrhunderts aus dem Grabfeld von Munningen," *Frankfurter Münzzeitung*, neue Folge II, No. 22 (Oct. 1931), pp. 325-328.

RULER	LOCATION	EXERGUAL MARK	COIN NOS.
Justinian	Udine in northern Italy	OBXX	2
Justin II	Hoischhügel in Carinthia	COX+X	73-
Justin II	Cividale in northern Italy	COMX+X	74-
Justin II	Munningen near Nordlingen	CONX+	75
Justin II	Hama in Syria	OBXX	43
	Hama in Syria	OBXX	47 and 49
	Hama in Syria	OB*+*	58-65
Justin II	Balkans (unknown location)	OB*+*	51
Justin II	Sadowetz in northern Bulgaria	OB*+*	52
Heracius	Müllingsen near Soest	OBXX	117
Heracius and Heracius Constantine	Wieuwerd in Frisia	BOXX	118 and 136
Heracius and Heracius Constantine	Kent in England	BOXX	124
Heracius and Heracius Constantine	Cornwerd in Frisia	BOXX	125
Heracius and Heracius Constantine	North Africa	BOXX	129
Heracius and Heracius Constantine	Wilton in Norfolk	BOXX	131

Finds, Hoards and Mints

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RULER	LOCATION	EXERGUAL MARK	COIN NOS.
Heracius and Heracius Constantine	Szentes in Hungary	BOXX	132
Heracius and Heracius Constantine	Mons in Belgium	BOXX	135(?)
Heracius and Heracius Constantine	Nietap in Frisia	BOXX	150
Heracius and Heracius Constantine	Sinzig near Ahrweiler	[BOX]X	153
Heracius and Heracius Constantine	Wonsheim near Alzey	OBXX	154
Heracius and Heracius Constantine	Pfahlheim near Ellwangen	BOXX	155
Heracius and Heracius Constantine	Southern Germany	XVOX	159.
Heracius, Heracius Constantine and Heracleonas	Dnieper Delta in the Ukraine	BOXX	
Heracius, Heracius Constantine and Heracleonas	Pereschtschepino near Poltawa	BOXX	
Constans II	Pereschtschepino near Poltawa	BOXX+	
Constans II	Dnieper Delta in the Ukraine	BOXX	
Constans II	Pereschtschepino near Poltawa	BOXX	
	Zatschepilovo near Poltawa	OBXX	

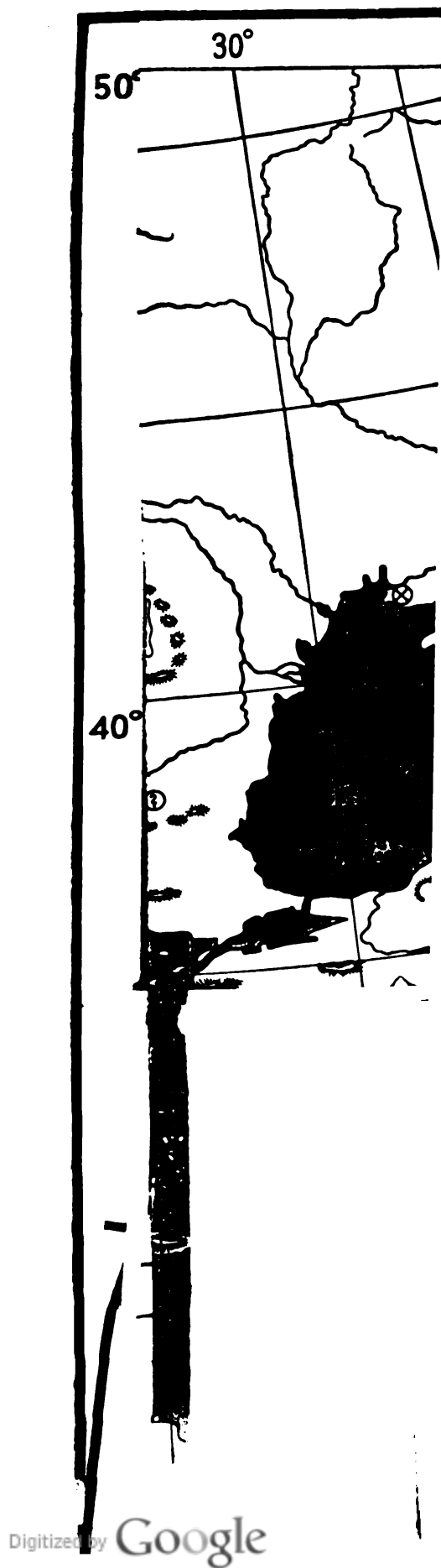
least in the instances of the imitations from Cividale, Hoischhügel, and Munningen the barbarian imitations cannot be much later than their prototypes. This is probably true of the remaining imitations of light weight solidi of Justinian and Justin II. The surprising number of examples of the authentic light weight solidi and the number of different dies of these coins from those two reigns show quite conclusively that the issues of these solidi were not as small as had previously been supposed. The relative speed with which they were imitated serves to strengthen the conclusion that these unusual exergual marks were well known in the West even if they were not completely understood.

The next group of coins stems from a single large hoard which was recently found in the neighborhood of Hama in Syria. Unfortunately the hoard fell into the hands of a dealer before it was scientifically studied with the result that much of it was dispersed. When rubbings were taken of the coins approximately 326 of them remained in the possession of the dealer while about 150 pieces had been sold. The original number of coins in the hoard therefore must have been in excess of 450 pieces and was probably about 475, but the fact that so little is known about the find because it is unpublished makes it difficult to assess its full significance. Until the hoard is studied and the material made available only some few observations can be made regarding mint attributions, but it is perhaps best to delay any such discussion until a later point in this chapter when the entire problem can be treated.

The last two light weight solidi of Justin II which were found *in situ* were discovered in Balkan sites. The first of these pieces was in the collection of Friedrich Stefan, who merely describes the circumstances under which it was unearthed as "*Balkanfund unbekannten Ortes.*"⁵ Neither the contents of the hoard nor its exact location can be discovered. The last piece was supposedly found at Sadowetz, in the district of Plevna, in northern Bulgaria, and is presently in the National Museum in Sofia.⁶ This is probably the very same hoard as

⁵ Stefan, "Der Münzfund von Maglern-Thörl (vergraben um 570/71 bis 584/85) und die Frage der reduzierten Solidi," *Numismatische Zeitschrift*, LXX (1937), p. 63, No. 17.

⁶ *Ibid.*, p. 62, No. 16.



the one described by Mosser as being discovered in 1934 at Sadowetz.⁷ If so, it has not been published in final fashion, and all judgement must rest upon the information furnished by Mosser. It was a rather large composite hoard containing fifty-four gold pieces and fifty bronzes extending from the reign of Justinian I through that of Maurice Tiberius. Since there were fifty bronzes present it would have been interesting to note which mints were represented in the hoard, but under the circumstances that is impossible. It is, however, certain that a *terminus post quem* for the burial of this hoard is fixed in 582 A.D. by the presence of five solidi, one tremissis and some bronzes of Maurice Tiberius. Since the site of the find lay within the ancient province of Moesia, a province which was within the boundaries of the Byzantine Empire until 679 A.D. when the Emperor Constantine IV after an unsuccessful campaign was forced to cede it to the Bulgars, it seems most probable the *terminus ante quem* for the burial of the hoard must be set in 602 A.D., the last year of the reign of Maurice Tiberius. Roman bronzes and solidi of the reigns of Phocas and Heraclius could logically be expected in a hoard of later date. If the bronzes were published it is more than likely that we should be able to date this burial with greater accuracy during the twenty year interval. One need not look far afield, however, for the probable circumstances which necessitated the deposit of this currency. Moesia, that area between the Danube and the Balkan Mountains, was in the late sixth century the scene of almost constant Avaro-Slavic pressure which was sometimes felt as far south as Thessalonica. The Byzantine forces which were at that time divided as a result of the Persian wars were unable to cope with this menace. The argument concerning the degree of Slavic settlement in Greece proper as an index of ethnographic changes in the area need not be discussed because all scholars are agreed that even the tremendous Avaro-Slavic attack which carried these barbarians to the very walls of Constantinople at the beginning of the last decade of the sixth century did not result in the complete elimination of the romanized population. In a word, Moesia was a frontier region where the barbarians and Byzantines clashed repeatedly and where representa-

⁷ Sawyer McA. Mosser, *A Bibliography of Byzantine Coin Hoards*, NNM, 67 (New York: The American Numismatic Society, 1935), pp. 74-75.

tives of each group were to be found.⁸ Hoards and stray finds of Byzantine coins of the period from this area are not uncommon. Perhaps the other solidus from an unknown Balkan site is merely another instance of this situation. In any event, when considered in conjunction with the single coin of Heraclius and Heraclius Constantine found at Szentes in the Middle Danube region, it is obvious that these few pieces from the Balkans as compared with the more numerous finds from elsewhere cannot be used to confirm the hypothesis proposed by Stefan. The coin from Szentes was simply a stray find.⁹ How these coins arrived in the region cannot be determined, but the possibilities are innumerable in view of the constant military activity.

Most of the remaining finds of light weight solidi were made at sites located in western Europe or in Britain. Within this geographical grouping the coins from Müllingsen, Wieuwerd, Kent, Cornwerd, Wilton, Mons, Nietap, Sinzig, Wonsheim, and Pfahlheim as well as the imitation from southern Germany must be treated. The first of this category of western finds from the post-Justinian period is a solidus of the sole reign of Heraclius which was found at Müllingsen, in the district of Soest, in Westphalia. It is described by Bolin as a Merovingian imitation, but close examination of the photograph of the piece leaves no doubt of its Byzantine origin.¹⁰ It is strikingly similar to a coin in the Dumbarton Oaks Collection though the two pieces are from different sets of dies.

In the case of the light weight solidi found in hoards of coins in the West we are on much firmer ground. The hoard from Wieuwerd,

⁸ An excellent account of the history of the barbarian incursions into the Balkans at this period has been written by Kenneth M. Setton, "The Bulgars in the Balkans and the Occupation of Corinth in the Seventh Century," *Speculum*, XXV (1950), pp. 502-543. He cites the older literature. In this work Professor Setton includes the incursions of other peoples as well as the Bulgars. See note 32.

⁹ L. Huszár, "Das Münzmaterial in den Funden der Völkerwanderungszeit im mittleren Donaubecken," *Acta Archaeologica Academiae Scientiarum Hungaricae*, V (1955), p. 97, No. CCIV. The coin was identified on the basis of an accurate description in the original notes of Csallány. Cf. D. Csallány, "Byzantine Money in Avar Finds," *Acta Archaeologica Academiae Scientiarum Hungaricae* II (1952), p. 239. It was found in 1934.

¹⁰ Sture Bolin, *Fynden av Romerska mynt i det fria Germanien* (Lund, 1926), O, No. 79 (Bilagor, p. 42). This coin is also treated by Joachim Werner, *Münzdatierte austrasische Grabfunde*, p. 118, No. 75.

which contained two light weight solidi of Heraclius and Heraclius Constantine, has been published in detail and is consequently better known than any which have already been discussed.¹¹ At Wieuwerd there were found three finger rings, the ornament of a buckle of a girdle, and thirty-five ornamental pendants which for the most part consisted of gold coins provided with loops for suspension. A total of twenty-nine coins were included in this hoard. The date of the hoard, of course, must be arrived at on purely numismatic grounds. Mosser gives a date of *ca.* 612 A.D. on the basis of the works on that hoard which had appeared by the time he published his bibliography. The older authorities generally date the actual deposit in the first half of the seventh century, but the later scholars have lowered the age of the hoard considerably. Werner, on the basis of the first edition of Boeles work on Frisia, gave the date as *ca.* 675 A.D.,¹² but in the last edition of his work Boeles again discussed this hoard. Since many of the coins had been used in the manufacture of jewellery, he held that they must have remained in circulation for some time. The latest of the coins in the find were two tremisses of Maastricht, one of which was struck by Ansoaldus of Maastricht. These coins could not have been struck before the middle of the seventh century because an older Ansoaldus type is known which was clearly issued as late as the third quarter of the century. On the basis of these facts and comparisons with other hoards, Boeles dated it merely in the second half of the seventh century.¹³

¹¹ On this hoard see J. Dirks, "Trésor de Wieuwerd. Ornaments et monnaies mérovingiennes et byzantines en or," *Revue de la numismatique belge*, XXII (1867), pp. 149–163, and Dr. S. Janssen, "Der merovingische Goldschmuck aus Wieuwerd," *Jahrbücher des Vereins von Alterthumsfreunden im Rheinlande* (*Bonner Jahrbücher*), XLIII (1867), pp. 57–91, as well as P. C. J. A. Boeles, *Friesland tot de elfde eeuw. Zijn vóór- en vroege gescheidnis* (2nd ed.: 's-Gravenhage: Martinus Nijhoff, 1951), pp. 312–313. For further bibliographica notices of this hoard see Sawyer McA. Mosser, *A Bibliography of Byzantine Coin Hoards*, NNM, 67, p. 98.

¹² Joachim Werner, *Münzdatierte austrasische Grabfunde*, p. 13, note 3. *Ibid.*, p. 71, merely places it in the second half of the seventh century because all of the coins were badly worn. Cf. Dr. S. Janssen, "Der merovingische Goldschmuck aus Wieuwerd," *Jahrbücher des Vereins von Alterthumsfreunden im Rheinlande* (*Bonner Jahrbücher*), XLIII (1867), p. 62, who merely dates it in the first half of the seventh century.

¹³ P. C. J. A. Boeles, *Friesland tot de elfde eeuw*, pp. 312–313. Boeles felt that

Very little can be said regarding the finds from Kent and Cornwerd. Both, of course, were of coins of Heraclius and Heraclius Constantine. In both instances it would seem as though stray finds from the seventh century were recovered. The solidus from Kent was originally part of the Rolfe-Mayer Collection (No. 7383) and is presently in the Liverpool Museum. The solidus from Cornwerd which is presently in the Friesch Museum in Leeuwarden (Inv. No. 355) may have been recovered in 1887, but it doesn't seem to have been noted until 1935, when Werner cited it simply as a solidus from Frisia because there was insufficient information regarding its provenance.¹⁴ Boeles has identified the actual locale of the find as Cornwerd, but nothing substantial concerning the circumstances of the find is known.¹⁵

With regard to the Wilton Cross, which has been the subject of much comment, the circumstances of the find are known in more detail. The cross, which holds a coin of Heraclius and Heraclius Constantine, was found as a stray object in a chalk pit at Wilton in Norfolk.¹⁶ Kendrick felt that the Wilton pendant was a Merovingian work of the middle of the sixth century, and that the coin which is presently framed in the pendant and which dated from the seventh century was a later addition. It was his view that the cross originally enclosed a jewel which was lost in the course of time, and the aperture was then filled by the solidus. This is supported by the fact that such mountings are normally made to fit the object to be framed, but in the case of the Wilton Cross the coin is fully half a centimeter too small to fit the aperture and is therefore held in place by a double beaded band of 0.25 cm. in width. Bruce-Mitford, on the basis of a careful study of the Sutton Hoo find, claims that the entire Wilton pendant was a local East-Anglian product of the second quarter of

Werner had made incorrect use of his first edition in dating it as precisely as he did to *ca.* 675 A.D.

¹⁴ Joachim Werner, *Münzdatierte austrasische Grabfunde*, p. 15, note 1.

¹⁵ P. C. J. A. Boeles, *Friesland tot de elfde eeuw*, Bijlage VIII, p. 510, No. 80.

¹⁶ T. D. Kendrick, "St. Cuthbert's Pectoral Cross, and the Wilton and Ixworth Crosses," *The Antiquaries Journal*, XVII (1937), pp. 283-293, esp. pp. 289-290. Earlier writers have mistakenly derived it from a gravel-pit at Lakenheath, near Brandon, in Suffolk. See Charles Roach Smith, "Saxon Remains, Found near Ixworth, in Suffolk," *Collectanea Antiqua, Etchings and Notices of Ancient Remains*, IV, p. 164, as well as *The Journal of the Archaeological Association* (British), VIII (1852), p. 139.

the seventh century.¹⁷ In either event the coin must have been placed in the cross during the seventh century and probably during the actual reign of Heraclius. Like the coins from Kent and Wieuwerd it was used in the manufacture of jewellery or ornaments.

The evidence regarding the find at Mons is not completely satisfactory because of the nature of the published sources. Mr. Philip Grierson has informed me of his belief that a solidus of this type was found at Mons in a hoard which was discovered about 1820, but he quite properly indicated that he had not been able to check this data completely. Mr. Grierson believed, on the basis of the data available to him that this solidus was sold in the Leclerqz Sale at Brussels on April 2, 1839.¹⁸ The mark in the exergue was misread on that occasion as SOXX. A pencil note in the copy of the Leclerqz Sale Catalogue in the possession of the Société Belge de Numismatique in Brussels, however, indicates that the coin was purchased by M. Lacour, and in the catalogue of the Lacour Sale which was held in Namur on July 24, 1848, several gold coins of Heraclius are listed but not specifically described.¹⁹ Since J. P. Meynaerts was a purchaser at the sale of the collection of Frédéric Lacour, and since such a light weight solidus was found in the Meynaerts Collection, it was more than possible that Meynaerts had purchased the piece in question. In his description of his own collection and in the sale catalogue of that collection such a solidus is listed.²⁰ In the Berlin Collection there is a cast of the coin from the Meynaerts Collection (Coin no. 134) which, if this reasoning were correct would be identifiable as the coin of the Mons hoard.

¹⁷ R. L. S. Bruce-Mitford, "The Sutton Hoo Ship Burial. Recent Theories and Some Comments on General Interpretation," *Proceedings of the Suffolk Institute of Archaeology and Natural History*, XXV, pt. I (1950), pp. 36-37.

¹⁸ p. 11, lot 124, of that sale catalogue. The sale catalogue is recorded by Frits Lugt, *Répertoire des catalogues de ventes publiques intéressant l'art ou la curiosité, deuxième période, 1826-1860* (La Haye: Martinus Nijhoff, 1953), No. 15360. The sale catalogue itself is apparently unobtainable in the United States.

¹⁹ This sale catalogue is also unobtainable in the United States, but it is cited by Frits Lugt, *op. cit.*, No. 19110. Lot 156 is simply described as "3 or" of Heraclius. Mr. Grierson presumed that this contained the Leclerqz coin.

²⁰ P. Meynaerts, *Description de la collection des médailles antiques en or, grecques, romaines, byzantines et visigothes, recueillies par J. P. Meynaerts de Louvain* (Gand, 1852), p. 97, lot 22, and Delbergue-Cormont Sale, 17-18 April 1857 (ed. M. de Coster, *Catalogue des médailles en or, grecques, romaines byzantines provenant du Cabinet de feu M. Meynaerts de Louvain*), p. 21, lot 146.

Such, however, is not the case for while the Lacour Sale did not take place until 1848, Meynaerts had reported such a coin in his collection some six years earlier.²¹ Only two possibilities remain, if the pencil notation in the Brussels' copy of the Leclerqz Sale Catalogue is accepted as accurate. Either the coin from Mons is not to be identified with the piece formerly in the Meynaerts Collection or Lacour must have disposed of it to Meynaerts at some time between 1839 and 1842. This latter possibility must be taken into account because the gold coins of Heraclius are not specifically described in the Lacour Sale Catalogue.

It seems fairly certain that the coin in the original Leclerqz Collection was derived from the Mons hoard. Unfortunately this hoard was neither adequately described nor scientifically treated, but two short notes by Lelewel do give us some idea of the contents. In addition to jewellery, some of which contained coins, there were some Merovingian tremisses, several of which were from the same dies, as well as some gold coins of Heraclius and two pieces of Suinthila, the Visigothic king. Lelewel, in his short notes concerning this hoard, adds that several of the coins as well as a ring were acquired by M. Leclerqz and passed from him to the Royal Collection in Brussels.²² The coins, however, do not actually seem to have accompanied the ring on that transfer, for Mr. Grierson, who has a most complete knowledge of the collection in Brussels, informs me that only the ring is now in the Bibliothèque Royale.

In the light of these facts it seems justifiable to suggest that the Meynaerts solidus, a cast of which is in the Berlin Collection is not identical with the coin found at Mons. The piece found at Mons was probable acquired by Leclerqz, and it passed from his collection to that of Frédéric Lacour, since there is no reason to doubt the correct-

²¹ There is a note to this effect by Meynaerts in *Revue de la numismatique belge*, I (1842), p. 240.

²² Joachim Lelewel, "Anciennes plaques décoratoires, sépulcrales, de distinction et marques honorifiques," *Revue de la numismatique belge*, I (1842), pp. 115-116. A few years earlier Lelewel had described this hoard as containing coins of Phocas, Heraclius, Suinthila, and several of the Frankish moneyers, among them Elalius of Soisson and Venenius of Treves. Joachim Lelewel, "Vingt-trois pièces des monétaires mérovingiens et une du roi visigoth Swintilla," *Revue numismatique*, I (1836), pp. 324-325.

ness of the pencil note in the Brussels' copy of the Leclercqz Sale Catalogue. From that point on its history is unknown.

The hoard from Nietap naturally provides a compliment for those of Wieuwerd and Mons. At Nietap, a town situated about two kilometers from Groningen, a hoard of seventeen coins was recovered in 1901, and it is denominated as Nietap II to distinguish it from an earlier hoard found at the same site. The hoard contained a Frankish imitation of a gold piece of Maurice Tiberius, a solidus of Heraclius and Heraclius Constantine marked BOXX in the reverse exergue (Coin no. 150), a Merovingian coin of Chalons-sur-Saône (*Civitas Cabilonensium*), another Merovingian coin of Mainz, a Frankish coin of an unidentified mint, three coins of Maastricht or imitations of that type, one piece of the Dronrijp type C, two of the Dronrijp type D, three unidentified light weight tremisses, one Frisian coin, and two other pieces which are simply listed as missing.²³ According to Boeles this Nietap hoard was buried a little later than those of Dronrijp. It should most probably be dated in the third quarter of the seventh century. Since it is most clearly a hoard of circulating medium and does not include jewellery, it forms a part of the general picture of the trade relationships in that corner of Europe which will be discussed later.

At Sinzig, in the district of Ahrweiler, in the Rheinprovinz, the double grave of a man and a woman was discovered, and in the funerary deposit there was a ring which enclosed a coin of Heraclius and Heraclius Constantine. The coin showed absolutely clear indications of the fact that it had been fastened into another ring prior to being placed in its present setting.²⁴ Werner, on the basis of this fact and the worn condition of the coin, considered this as the most recent grave of his Group V. He felt that the coin could only have been put into the grave after a long period of exposure to the circum-

²³ On this hoard see P. C. J. A. Boeles, "Merovingische Munten van het Type Dronrijp en de Vondst van Nietap," reprinted from *Gedenkboek A. E. Van Geffen een kwart eeuw Oudheidkundig Bodermonderzoek in Nederland* (Meppel: J. A. Boom & Zoon, 1947), 16 pp. Also see P. C. J. A. Boeles, *Friesland tot de elfde eeuw*, pp. 309-317, esp. pp. 311-312.

²⁴ Joachim Werner, *Münzdatierte austrasische Grabfunde*, p. 105. The necropolis was actually at Helenenberg near Sinzig.

stances making for wear. As a result he dated this grave towards the end of the seventh century.

The finds from Wonsheim and Pfahlheim are logically connected with that of Sinzig. At Wonsheim, in the district of Alzey, Rheinhessen, another solidus of Heraclius and Heraclius Constantine was found in a woman's grave, and once again it was set in a ring. It was accompanied by a triens from the region of Mainz which was struck in the period between *ca.* 580–*ca.* 650 and several other objects which cannot be dated accurately.²⁵ Since the solidus is quite worn and the other objects as well as the triens seem to indicate a date rather well along in the second half of the seventh century, this deposit may be a slightly earlier contemporary of that of Sinzig.²⁶

At Pfahlheim, in the district of Ellwangen, in Württemberg, in Grave 4 of the necropolis, this time the burial of a man, another solidus of Heraclius and Heraclius Constantine fastened into a ring was found associated with some other objects. These remains cannot be accurately dated. The coin is relatively unworn though it has been clipped. At least one other object in this funerary deposit aside from the solidus was an Italian import. The date of the burial, as determined by Werner, is in the second half of the seventh century, but somewhat earlier than those of Wonsheim and Sinzig.²⁷

A barbaric imitation of this type was also found in an Alemannic grave in southern Germany. The exact location of the site is not given, but the coin does seem to be Alemannic in origin.²⁸ Even though the

²⁵ *Ibid.*, pp. 102–103. A full account of the bibliographical material about this find is given there.

²⁶ *Ibid.*, pp. 60–62.

²⁷ *Ibid.*, pp. 100–101, gives a complete description of the find and the bibliographical references. *Ibid.*, p. 59, dates the deposit and mentions the Italian character of the bronze vessel from this grave.

²⁸ Cahn Sale 75 (30 May 1932). *Antike Münzen, Griechische Münzen aus ausländischem und norddeutschem Besitz. Das fürstlich fürstenbergische Münzkabinett zu Donaueschingen. Teil I. Die Serien der Römer, der Byzantiner, der Münzen der Völkerwanderungszeit und der Kreuzfahrer. Die Münzen der römischen Kaiserzeit aus der Sammlung des Justizrats Dr. E. J. Haeberlin* (Frankfurt a. M.: Adolph E. Cahn, 1932), No. 1847. This coin is listed as probably Alemannic. Friedrich Stefan, "Der Münzfund von Maglern-Thörl (vergraben um 570/71 bis 584/85) und die Frage der reduzierten Solidi," *Numismatische Zeitschrift*, LXX (1937), pp. 55–56, mentions this piece as a find from an Alemannic grave in southern Germany.

exergual inscription in this instance is not exactly the same as the authentic Byzantine one, it is clear that the Alemanni did know these light weight solidi. Unfortunately it is impossible to date the deposit without further information.

A most obvious omission in the discussion of these finds from the West up to this point has been the coin from North Africa. This coin was part of a hoard which came to the attention of Mr. Grierson while he was in Paris. It was already incomplete at that time, and only fifteen of the coins were published by Grierson²⁹. These fifteen pieces covered the period from the reign of Justin II through the joint reigns of Heraclius and Heraclius Constantine. The light weight solidus included in the hoard is clearly not a product of North African manufacture. In fact it is the only such coin found in that area, so it must be considered apart from the others. The hoard is evidently of the seventh century, but how it came to include the only light weight solidus from the region remains an unsolved puzzle. It would seem very improper to place too much weight on the existence of a single piece from a North African hoard in view of the fact that the other finds fall into recognizable groups. Extreme mobility is one of the most evident features in the study of coins, and innumerable explanations could be proposed to give significance to the sole example of a light weight solidus from North Africa, but they would all be hypothetical. Under the circumstances it would certainly seem best not to speculate too much concerning the exact significance of the single coin which found its way into the North African hoard.

The remainder of the light weight solidi come from the region to the north of the Black Sea and may well be considered apart from the other finds. Unfortunately these hoards have not been adequately described or treated and no photographs of their contents were available. Bauer, however, reported that in 1912 some herdsmen had discovered sixty-one gold coins which had been buried in a deposit containing gold and silver utensils as well not far from Pereschtschepino in the Government of Poltawa.³⁰ Only four of these coins

²⁹ Philip Grierson, "A Byzantine Hoard from North Africa," *Numismatic Chronicle*, Series 6, XIII (1953), pp. 146-148.

³⁰ The information regarding this hoard is derived from N. Bauer, "Zur byzantinischen Münzkunde des VII. Jahrhunderts," *Frankfurter Münzzeitung*, II, No. 15 (March 1931), pp. 227-229.

retained their original appearance as coins while the remainder had been used in the manufacture of ornaments. This hoard contained one piece of Maurice Tiberius, two coins of Phocas, six of Heraclius and Heraclius Constantine, thirty-six solidi of the joint reigns of Heraclius, Heraclius Constantine and Heracleonas, and finally sixteen gold coins of Constans II. Interestingly enough, of the thirty-six coins of the three-emperor type from the reign of Heraclius only one had the normal exergual mark CONOB; of the remaining thirty-five solidi twenty-seven were marked BOXX and eight bore the exergual inscription BOXX+. All sixteen of the coins of Constans II were marked OBXX. The fact that all of the twenty-seven coins bearing the mark BOXX were struck from two obverse dies and four reverse dies while all of the eight coins inscribed BOXX+ were derived from the same pair of dies, and all of the sixteen BOXX pieces were produced with two obverse and four reverse dies is not without significance. Obviously these coins were collected and used in the manufacture of jewellery at some spot not too far removed from the place of issue, possibly at the mint itself, and at a period not too distant from the time they were struck. If these coins had been chosen by a random selection from those in circulation about 650 A.D., even if it occurred in an area which utilized coinage from a single mint to a far greater degree than coinage from other mints, it is hardly to be expected that the same restricted number of dies would occur. Even in an area which issues coins in quantity and subsists by importing other goods in return for its coins, the replacement of worn out dies would be rapid enough at the mint so that many more dies might logically be expected. These pieces must therefore have been used in the production of ornaments within the Byzantine Empire, possibly at official mints, and the finished articles must have been shipped into southern Russia. Since no coins of Constantine IV Pogonatus were found with this hoard though he struck light weight solidi, it seems completely logical to suppose that the articles included in the Pereschtschepino find were exported from the Empire prior to 668 A.D. That the hoard was necessarily buried as early as 668 A.D., however, does not necessarily follow. It is certainly highly probable, but since the hoard was not actually composed of currency media, that is not a necessary conclusion.

Bauer further reports that his colleague Zograph, while spending the summer in southern Russia in 1927, was shown seven Byzantine solidi that were ostensibly found associated with other valuable utensils in the Dnieper Delta. There were six coins of Heraclius and one piece of Constans II. All of the coins of the three-emperor type, and Bauer unfortunately does not record how many there were included in this hoard, were marked BOXX. There is hardly enough information published concerning this hoard to make possible any very significant inferences or conclusions, but it is certainly most probable that the contents of this hoard were also exported to Russia between 641 and 668 A.D. Since there is no mention of these coins being used in the manufacture of jewellery, we may presume that they were intended for commercial purposes, and perhaps the hoard was buried relatively quickly after it left the Empire.

In 1928 a find of still another seven Byzantine solidi associated with costly utensils was made at Novo-Sandsherovo or Zatschepilovo in the Government of Poltawa. These seven solidi were contemporary with those of the Pereschtschepino hoard, and the gold coins of Constans II, which again are not described, had the inscription OBXX in the reverse exergue.³¹ It would seem most probable that this hoard also dates from the second half of the seventh century.

These three eastern hoards may be discussed apart from the other finds. Perhaps the deposit of these treasures is to be connected with the movements of the Bulgars in the seventh century. It should be remembered that it was during the reign of Constans II that pressure from the Khazars forced the Bulgars to move westwards from their settlements in Old Great Bulgaria on the steppes bordering the Sea of Azov. Under their leader or king, Asparuch, the Bulgars moved slowly westwards across the Ukraine and settled at the mouth of the Danube. In 679 A.D., after the defeat of Constantine IV Pogonatus, the Bulgar realm, which already included the Dobrudja, was expanded by the absorption of the territories between the Danube and the Balkan Mountains. The actual movement of the Bulgars across southern Russia must have taken place at some time in the period between 650 and 668 A.D., if the view of some recent scholars that they were settled in the Dobrudja prior to the death of Constans II

³¹ *Idem.*

is correct.³² Obviously the movement of this barbarian horde across the plains of southern Russia must have caused major dislocations which resulted in a temporary cessation of peaceful commerce to a great degree and the burial of treasure. The three hoards containing light weight solidi are more than likely the natural result of that migration.

The finds of light weight solidi, insofar as they can be dated with any degree of accuracy, fall into the period from 570/71 to ca. 700 A.D. These are the extreme limits. No light weight solidi have been found which because of associated finds must be recognized as coming from sites which are to be dated after the reign of Constantine IV Pogonatus. Apparently the light weight solidi passed out of circulation very rapidly after the last ones were struck. Certainly the character of the finds is such that they would seem to be primarily designed for use in border regions and foreign lands. Only the two finds, from North Africa and Hama respectively, are found in areas removed from the northern frontiers but still within the Empire. Therefore, since many Syrians were engaged in commerce, only the coin from North Africa would require a deeper explanation.

As to the dating of the actual finds it must be remembered that the mere fact that a coin was not placed in a deposit before the latter part of the seventh century is not to be considered as indicating that the coin was not in the region of its final deposit at a much earlier period. Indeed the worn condition of the coins from the finds is the

³² An excellent short account of the history of the Bulgar invasions of the Balkans has been written by Kenneth M. Setton, "The Bulgars in the Balkans and the Occupation of Corinth in the Seventh Century," *Speculum*, XXV (1950), pp. 502-543. He cites most of the important older literature, but particular attention should be given to W. N. Slatarski, *Geschichte der Bulgaren*. I. Teil, *Von der Gründung des bulgarischen Reiches bis zur Türkenzeit (679-1396)* (Leipzig, 1918), pp. 10-15, in ed. Gustave Weigand, *Bulgarische Bibliothek*, V, and J. Moravcsik, "Zur Geschichte der Onoguren," *Ungarische Jahrbücher*, X (1930), pp. 52-90. Cf. Peter Charanis, "On the Capture of Corinth by the Onogurs and Its Recapture by the Byzantines," *Speculum*, XXVII (1952), pp. 343-350, opposing Setton's view and Kenneth M. Setton, "The Emperor Constans II and the Capture of Corinth by the Onogur Bulgars," *Speculum*, XXVII (1952), pp. 351-362, answering Charanis. This subject was treated once more by Charanis. See Peter Charanis, "The Significance of Coins as Evidence for the History of Athens and Corinth in the Seventh and Eighth Centuries," *Historia*, IV (1955), pp. 163-172.

only reason for dating their deposit so late. The light weight solidi must have been designed for a specific purpose and were probably put to use fulfilling that purpose as soon as possible after they were issued. Thus, if they were designed for use in a specific locale, they must have reached their destination fairly quickly even though the stresses and strains making for the deposit or burial of treasure did not affect them until they had circulated for some years. This is not an abnormal condition to be encountered in the study of hoards.

Briefly put the hoards and finds of light weight solidi and their imitations fall into certain natural geographical groups. There is the western class which includes the hoards from northern Italy, Carinthia, southern and western Germany, Belgium, Frisia and England which is by far the largest. In this category, therefore, would be found the coins from Udine, Cividale, Hoischhügel, Muningen, southern Germany, Pfahlheim, Wonsheim, Sinzig, Müllingsen, Mons, Cornwerd, Nietap, Wieuwerd, Kent, and Wilton. These sites form a chain with only minor deviations extending from northern Italy to England. In the Balkans there were three finds, that of Szentes, that of Sadowetz, and one from an unknown site. In southern Russia there were the finds from the Dnieper Delta, Pereschtschepino, and Zatschepilovo. In addition there was the unique find from North Africa and the great hoard from Hama which must be considered separately.

The sites of the hoards pertinent to the study of light weight solidi may be compared with the other contemporary gold hoards as listed by Mosser. Admittedly Mosser's list of hoards is not complete and does not contain any finds later than 1935 nor the stray finds of individual pieces, but it does provide a representative selection of those known. Only the gold hoards buried in the period from the reign of Justinian to that of Constantine IV Pogonatus have been listed.

Justinian

El Djem, Tunis, Africa
Benevento, Italy
Cotrone, Italy
Finero, Domodossola, Italy
Sessa Arunca, Italy
Zeccone, Lombardia, Italy
Alise-Saint-Reine, Cote D'Or, France

	Hyères, France
	Viviers, Ardèche, France
	Frickingen (?), Württemberg, Germany
	Biesenbrow, Brandenburg, Germany
	Deerlyk, Belgium
	Velsen, Netherlands
	Akebäck, Gotland, Sweden
	Rovalds, Vänge, Gotland, Sweden
	Hadji Sinanlar, Varna, Bulgaria
	Tchenghe, Bulgaria
	Kapril di Sebenico, Yugoslavia
	Zaschowitz, Moravia
	Batum, Georgia, Transcaucasia
	Smekalovka, Batum, Transcaucasia
	Bieliarovka, Taganrog, Russia
Justin II	No gold hoards buried during this reign are mentioned by Mosser.
Tiberius II Constantine	Ortacesos, Sardinia
	Ghertche-Cunar, Bulgaria
	Narona, Dalmatia, Yugoslavia
Maurice Tiberius	Escharen, Netherlands
	Nokalakewi, Georgia, Transcaucasia
	Unknown locality, Egypt
	Selinti, Adana Vilayet, Asia Minor
	Cyprus
Phocas	Unknown locality, Asia Minor
	Osetia, Terek, Transcaucasia
Heraclius	Beth Shan, Palestine
	Aydin Vilayet, Asia Minor
	Madjid Eüsü, Adana Vilayet, Asia Minor
	Chatalja, Constantinople Vilayet
	Rhodes, Isle of Rhodes
	Alexandria, Egypt
	Thuburbo Majus, Tunis, Africa
	Goulette, Tunis, Africa
	Henchir-Sidi Amor-Bou-Hadjela, Tunis, Africa

	Rome, Italy
	Campobello, Trapani, Italy
	Akalan, Bulgaria
	Szengedin, Hungary
	Sarre, Kent, England
Constans II	Tschausch, Asia Minor
	Athens, Greece
	Settimo, Sardinia
Constantine IV Pogonatus	Arkesine, Amorgos
	Unknown locality, Africa
	Carthage, Africa
	Pantalica, Sicily
	Lacco Ameno, Ischia, Italy
	Torontal, Hungary

The hoards which contained both light weight solidi as well as the normal variety have, of course, been excluded from this list, but the concentration of the finds within the area under effective Byzantine control and the rather sharp break in the number of Byzantine coins found in the West after the reign of Heraclius is immediately noticeable. A survey of the hoards listed by Mosser reveals that after the reign of Constantine IV Pogonatus there are no Byzantine gold hoards found in the successor states in the West for a considerable period of time. This can be further supported by the list of finds given by Sture Bolin,³³ and the same situation was found to exist in the Danubian region when the finds of that area were studied by Huszár, Csallány, and Moisil.³⁴ The historical significance of these facts cannot be minimized. Certainly it must play an important part in the formulation of any

³³ Sture Bolin, *Fynden av Romerska mynt i det fria Germanien*, Bilagor.

³⁴ L. Huszár, "Das Münzmaterial in den Funden der Völkerwanderungszeit im mittleren Donaubecken," *Acta Archaeologica Academiae Scientiarum Hungaricae*, V (1955), pp. 61-109; D. Csallány, "Byzantine Money in Avar Finds," *Acta Archaeologica Academiae Scientiarum Hungaricae*, II (1952), pp. 235-244 (in Russian). There is a French summary of this work published in the same issue of this journal. C. Moisil, "Sur les monnaies byzantines trouvées en Roumanie," *Bulletin de la Section Historique, Académie Roumaine*, XI (1924), pp. 207-211. Moisil notes that the finds in Roumania assume significant numbers in the reign of Justinian and fall off sharply during the second half of the seventh century. See Chapter I, note 45.

general historical theory regarding the Pirenne thesis and the general decline in the West. This aspect of its significance, however, must be treated in a wider context in the final chapter of this monograph.

Nevertheless some observations of a more specific nature with regard to the finds of light weight solidi are also possible. All of the finds from the West can be traced to the period during which Byzantine gold coinage was introduced into the barbarian successor states in a meaningful quantity. The finds of these light weight coins are, however, largely limited to the general area of one specific trade route, i.e., that from northern Italy over the Alps, down the Rhine and across the English Channel though, of course, they occur elsewhere as well. Several of the coins have been mounted in loops after a fashion which is most closely associated with Frisian finds. This, of course, strengthens the association of the light weight solidi with the particular route to Frisia and the general area of north-western Europe. This route must have been at the height of its importance during the reign of Heraclius. That is to say that during the period when the Empire was faced with the Persian menace in its most acute form the efforts of Byzantine traders in the West must have reached the zenith. After the death of Heraclius, Byzantine interest shifted somewhat to southern Russia, but the movements of the Bulgars put a sudden, though temporary, check to this effort. The three finds from the Balkans are undoubtedly simply a part of the general trade effort of the Byzantines in that area which is merely one aspect of the general interest in the West manifested by the Byzantines in the sixth and seventh centuries.

It is evident from the style of the light weight coins themselves that only two could have been minted in the West where most of the finds were located, and it is therefore a matter of some importance to discover which mints issued these solidi. These mints must have been the sources of the Byzantine coins used in the western trade. In this connection the Hama hoard provides some vital evidence. In that hoard there were three light weight solidi marked OBXX: and eight more which were marked OB*+* with ΘS at the end of the reverse legend. Although in only one instance was there a die identity of the reverses it seems fairly obvious that the mint issuing these pieces must have been in the general vicinity of the find spot. Only one place in

Syria will answer as the source of these coins, Antioch, which was destroyed by an earthquake on Nov. 29, 528 A.D. and was renamed Theoupolis after its restoration. That Antioch possessed a mint is certain from the existence of bronze currency of this period with mintmarks such as $\text{THE}\Psi\text{P}$, $\text{ΘH}\Psi\text{P}$, $\text{ZH}\Psi\text{P}$, ΘYΠOΛS , ΘYΠO , and P or similar ones as well as earlier coins bearing the older name of the city.

The suggestion that Theoupolis-Antioch was the mint issuing these gold coins marked ΘS and $\text{OB}***$ was first made in the catalogue prepared by Sabatier, but this hypothesis has a history of its own and new evidence such as that from the Hama hoard can now be presented in support of it.³⁵ Tolstoi in his catalogue of Byzantine coinage rejected Sabatier's proposal because the only gold coins of which he had cognizance from that mint were those which he attributed to the usurper Leontius.³⁶ As an alternative suggestion Tolstoi mentioned the possibility that a barbaric error had been made in the course of cutting the die, but he indicated quite correctly and clearly, that even this latter explanation did not satisfy him. It was even less probable than the hypothesis proposed by Sabatier because there were a number of coins of Justin II, Tiberius II Constantine, and Maurice Tiberius with those very letters at the end of the reverse inscription, and those pieces were not barbaric in any way. Tolstoi, however, went even further in his discussion of this problem in connection with still another coin which showed a reverse legend ending in ΘSS .³⁷ This

³⁵ J. Sabatier, *Description générale des monnaies byzantines frappées sous les empereurs d'orient depuis Arcadius jusqu'à la prise de Constantinople par Mahomet II* (Paris and London, 1862), I, p. 224. Philip Grierson, "The Kyrenia Girdle of Byzantine Medallions and Solidi," *Numismatic Chronicle*, Series 6, XV (1955), p. 65, note 38, supports the view that this hoard from Hama is evidence for the Antiochene origin of these coins.

³⁶ J. Tolstoi, *Monnaies byzantines* (St. Petersburg, 1913-14), p. 418. Cf. *Ibid.*, p. 874, and Warwick W. Wroth, *Catalogue of the Imperial Byzantine Coins in the British Museum* (London, 1908), II, p. 346, where it is clearly stated that no coins of the usurper Leontius (695-698 A.D.) are extant. In more recent days some coinage has been attributed to Leontius the Usurper. Ludovico Laffranchi, *La Numismatica di Leonzio II. Studi su un periodo della monetazione Italo-Bizantina* (Perugia, 1940), 47 pp. This is reprinted from a series of articles which appeared in *Numismatica e Scienze Affini*, IV (1938), pp. 73-74; V (1939), pp. 7-15, 91-92; VI (1940), pp. 20-22. Also See J. P. C. Kent, "The Mystery of Leontius II," *Numismatic Chronicle*, Series 6, XIV (1954), pp. 217-218.

³⁷ J. Tolstoi, *Monnaies byzantines*, p. 469. See Coin no. 79 of the Catalogue.

coin was quite certainly the result of a double striking, but since Tolstoi refused to accept that fact, he reasoned from the existence of the double *sigma* that the final *sigma* in all of the other cases could not be the mark of an *officina* but was part of the name of the mint. He noted that the style and composition of the piece seemed to him to indicate an eastern origin, perhaps Constantinople. At the same time he once again rejected Sabatier's view that the letters ΘS might contain the abbreviation of the name of the city of Theoupolis-Antioch because he could not find any contemporary examples of the name of a mint city occurring at the end of the reverse inscription.

This was the status of the problem until 1937 when Friedrich Stefan, as has been pointed out in Chapter one, argued on the basis of the finds in the Balkans and southern Russia that the ΘS was to be identified with the mint of Thessalonica.³⁸ Byzantine mints, he maintained, were at this time designated by not more than a single letter at the end of the reverse legend. This contention itself is invalid, but on the basis of it Stefan proposed the view that the S at the end of the legend stood for the sixth *officina* and that the Θ was the mark of the mint of Thessalonica. By a quite independent route Hugh Goodacre arrived at the same conclusion five years later.³⁹ In 1941 Goodacre noted in connection with the British Museum solidus of Justin II and Tiberius II Constantine that this light weight coin bore the unusual mark ΘS. Since he was well aware that the bronze currency of Thessalonica during the reign of Justinian presented some unusual denominations, he argued that it was based on a different weight for the solidus and that the gold pieces marked ΘS were the solidi of Thessalonica. Thus the view that this mark stood for the Balkan mint gained currency, and it was repeated in much of the secondary literature.

The first real attack against this proposal was made by Leo Schindler and Gerhart Kalmann who pointed out that as early as the reign of Justinian a *theta* was known to have appeared at the end of

³⁸ Friedrich Stefan, "Der Münzfund von Maglern-Thörl (vergraben um 570/71 bis 584/85) und die Frage der reduzierten Solidi," *Numismatische Zeitschrift*, LXX (1937), p. 55.

³⁹ Hugh Goodacre, "Justinian and Constantine," *Numismatic Chronicle*, Series 6, I (1941), pp. 48-53.

the reverse inscription on some solidi.⁴⁰ According to these two numismatists the explanation connecting the ΘS with Thessalonica was untenable because all of the bronzes struck at Thessalonica during the period in question bore the Latin inscription TES as a mintmark. The Greek form ΘΕS first appeared during the reign of Heraclius. They therefore took the position that the *theta* was an *officina* mark and that the S or SS had to await further clarification.

The evidence of the Hama hoard seems to be conclusively in favor of the original suggestion made by Sabatier, but there is still more evidence to corroborate that from the find. If a close study of Coin no. 79 is made, the same coin which started Goodacre's study of the ΘS ending of the reverse inscription, several interesting bits of information come to light. A coin from the Kyrenia hoard on Cyprus, this time a solidus of the full weight type (see note 45 of the Catalogue), shows a die identity of the obverse with Coin no. 79. These two coins were therefore issued by the same mint. The Kyrenia coin, as has been said, comes from Cyprus, a locality not too distant from Antioch, and Coin no. 79 was purchased in 1938 by the British Museum from a Syrian coin dealer in Syria itself. Furthermore, Antioch, apart from Carthage, was the only place during the period which issued coins with two busts as opposed to the type with two seated figures which is quite common.⁴¹ Only Antioch, however, issued coins with the busts of the emperor and his heir apparent or co-ruler. Those of Carthage are of the Emperor Justin II and the Empress Sophia. In addition the style of the solidi in question obviates the possibility of Carthage as a source. Thus the location and design of these two pieces can be used to strengthen the conclusions arrived at by Sabatier and confirmed by the Hama hoard. The fact that Greek letters were used to indicate bronze coins of Theoupolis-Antioch at all times and certainly after its restoration during the reign of Justinian removes one of the principal objections raised in connection with the identification of Thessalonica as the issuing locality.⁴²

⁴⁰ Leo Schindler and Gerhart Kalmann, "Byzantinische Münzstudien. II. Das 33 Nummistück Justinians I.," *Numismatische Zeitschrift*, LXXII (1947), p. 109.

⁴¹ Justin I and Justinian from Antioch, *B.M.C., Byz.*, plate IV, nos. 7 and 8. Justin II and Sophia from Carthage, *B.M.C., Byz.*, I, plate XIII, nos. 6, 7, 9, and 10.

⁴² *B.M.C., Byz.*, I, plate VIII, nos. 4 and 5.

If the ΘS is understood as indicating Theoupolis then all of the coins of Justin II marked OB*+* (Coins nos. 50-71) as well as the two solidi of Justin II and Tiberius II Constantine (Coin no. 79 and the Kyrenia piece), and those solidi of Tiberius Constantine as sole ruler marked OB+* (Coins nos. 80-87), and those of Maurice Tiberius marked the same way with ΘS at the end of the reverse inscription (Coins nos. 94-99) were necessarily struck in Antioch. The remaining coins marked OB*+*, OB+*, or OB⁺_{*} show somewhat different characteristics and must therefore have been struck elsewhere. Where these other pieces were struck depends largely upon a very close stylistic study.

The three coins from the Hama hoard marked OBXX, however, also present a recognizable characteristic that is of some importance. At the end of the reverse legend or following the exergual mark there are a series of dots. These dots are also present on one of the light weight solidi of Justin II in Vienna as well as on one which appeared in the Brüder Egger Sale of Nov. 28, 1904.⁴³ The provenance of the coins from Hama again seems decisive in supporting Antioch as the source of these coins. Mr. Grierson has suggested to me the possibility that at about this time the unity of the mint of Antioch showed the first signs of disintegrating, and that as a result it may well be that this particular series of solidi was not struck in Antioch itself but in one of the surrounding towns which assumed part of the duties of that mint. It seems fairly certain that a significant number of the authentic light weight solidi were derived from the great Syrian emporium or its environs. The merchants of the Syrian metropolis must have brought these coins to the West because similar dots are found on the barbarian imitations that were recovered at Hoischhügel and Cividale as well as on some of the imitations that have appeared in the sale catalogues.

Only Coin no. 22 (Justinian) and Coin no. 90 (Maurice Tiberius) of the authentic light weight pieces were almost certainly struck in the West though it would be rash to attempt to identify the particular mints. All of the remaining coins of the light weight variety were

⁴³ Coins nos. 43, 47, and 49 are from the Hama hoard. Coin no. 46 is from Vienna, and Coin no. 48 is from Brüder Egger Sale XL, 28 Nov. 1904, lot 2918. Cf. Coins nos. 44 and 45.

apparently struck in the East, probably at Constantinople, a city which was also a center of Byzantine external trade. Other mints may have participated in the production of these coins, but it is impossible to identify them with certainty.

The study of the finds and the issuing mints of the light weight solidi has revealed a startling connection between the external trade of the Byzantine Empire and this series of coins. The coins appear most obviously along a specific trade route leading from northern Italy to Frisia and England, but they also occur in the border regions of the Balkans as well as in southern Russia. It may be easily seen that they were not widely used in internal Byzantine trade by simple comparison of the find spots of normal solidi with those of the light weight variety. It is equally true that they were not used in the foreign trade to the exclusion of full weight solidi because examples of both varieties are found together in many hoards. Since the light weight solidi were struck during the period of greatest Byzantine effort in Europe and cease at just the moment when finds of imperial coins are no longer evident in the areas outside the European limits of Byzantine control, this connection with foreign trade is further strengthened. Indeed the very mints which issued these pieces were the emporia of Byzantine long distance western trade.

The final explanation for the existence of this rather unusual series of coins must take into account these facts as well as the evidence that the coins were issued in greater quantity during the reigns of Justinian, Justin II, and Heraclius than at any other time. The number of dies clearly indicates a rather large issue, and the imitations of the Theoupolis-Antioch type of Justin II which appeared so quickly show that the barbarians were very rapidly made aware of these coins. It is immediately evident that the solution encompasses a very large field of general economic history and is of some importance in the evaluation of the Pirenne thesis in its more recent restatements. The general problem of Byzantine trade in Europe and particularly in the Rhine Valley must be dealt with in the light of this new evidence furnished by numismatics.

THE BYZANTINE TRADE WITH THE WEST

The civilization of Byzantium, marked as it was by interest in Christianity and in matters of theological import, was not likely to be conducive to treatises on such matters as political economy and monetary policy. Byzantine authors, perhaps even more so than those of classical antiquity, refrained from writing about the mundane affairs of commerce and money. Only occasionally, in a work devoted to what was the larger topic of a chronicle or in a sermon or in one of the saints' lives, do we find chance bits of information which can aid in the reconstruction of the economic history of the Byzantine Empire. As a result of this reticence on the part of the Byzantine authors, archaeology and numismatics, as ancillary sciences of history, must provide the necessary data for a comprehensive approach to the problem. The remarks of the contemporary authors cannot form the framework whereby one can interpret the archaeological and numismatic evidence, but rather the reverse is true, and the literary remains, insofar as they pertain to economic history, must be understood in terms of the physical legacy of the Empire.

Three statements from contemporary authors furnish information regarding the monetary policies of the Emperor Justinian. The first of these is contained in the *Chronographia* of the Syrian monk John Malalas. What Malalas tells us is the testimony of a contemporary, and it must therefore be given great weight. Since he was particularly cognizant of the state of affairs at Antioch, a town which was in commercial contact with the West, his remarks assume even greater significance. Malalas says that in the month of March in the first year of the indiction, there was a disturbance among the lower classes or poor because of the changing of the value of the *kermata* or copper coinage used as small change, and that when the news of this was brought to the Emperor Justinian, he ordered that the coins be restored to their former value.¹ This event can easily be dated in the

¹ Ioannis Malalas, *Chronographia*, XVIII, O, 231 C (ed. Bonn, p. 486): Μὴνι μαρτίῳ Ἰνδικτιῶνος ἃ ἐγένετο διαστροφή τοῦ κέρματος· καὶ ἐκ τῶν πτωχῶν στάσεως

year 554 A.D. by virtue of the fact that the preceding section which speaks of the death of Totila is dated in the fifteenth year of the indiction. What actually happened, however, is a somewhat more critical matter. Firstly, it may be pointed out that the statement does not refer to an alteration in the gold coinage, but it must indicate a change in the values of the subsidiary coinage. The use of the word *kermata* is decisive in that respect, but this is also supported by the fact that the disturbance was created by the lower classes whose contact with currency must have been largely limited to the use of the subsidiary coins. It is also evident that the change was only temporary in nature and was not in itself a fundamental aspect of imperial monetary policy.

Since this temporary change in the value of the subsidiary currency which was so disadvantageous to the poorer classes could be remedied easily by a decree of the Emperor Justinian, it is apparent that the change in value was accomplished by administrative action and was not the result of economic pressures. The value of all of the subsidiary coins in relation to the standard unit, the gold solidus, was regulated by the imperial government. Bronze coins were purely fiduciary in the Byzantine Empire, and their size and weight were determined by other factors than the intrinsic value of the metal. Changing the fiat value of the bronze coins, as was done in this instance, would not necessarily be reflected on the actual coinage itself in any way save possibly by a change in the mark of value, if that mark of value expressed the worth of the coin in terms of gold. In fact, however, the marks of value on Byzantine bronze coins expressed the worth of the piece in terms of a still smaller bronze unit, the nummus. A change in the number of bronze units equal to a solidus would affect the fiat value and the purchasing power of all of the bronze coins, but it would not be reflected in the marks of value on the coins. Thus, if the bronze follis was marked M and was worth forty nummi, and the solidus was said to contain 7,000 nummi, each follis would be equal to 1/175th of a solidus. If, however, the imperial government were to order by decree that 7,200 nummi were now to equal one solidus of the same weight and fineness as before, the value of the follis would

γενομένης καὶ θορύβου ἀνηνέχθη τῷ αὐτῷ βασιλεῖ· καὶ ἐκέλευσε τὴν κατάστασιν τοῦ κέρματος κρατῆσαι κατὰ τὸ ἀρχαῖον ἔθος.

still be forty nummi, and the mark of value of the follis would still be M, but the follis would only be equal to 1/180th of the gold solidus. The bronze fiduciary coin would have lost some of its value, but this fact would not be reflected in any way on the coinage itself. This is a hypothetical case,² but it does explain what Malalas was describing in his short statement. The evidence to support such an interpretation of Byzantine monetary practice is derived from early Byzantine sources though it should be noted that these sources are not coeval with the quotation from the Syrian monk.³

² In *Nov. Valent.*, XVI (ed. Mommsen and Meyer, *Codex Theodosianus*, II, p. 101) of 445 A.D., it is stated that money-changers may buy the solidus for 7,000 nummi and may sell it for 7,200 nummi. The law codes specifically require that all obryza solidi be exchanged at the same price. *C. Just.*, XI, 11, 3, and *C. Th.*, IX, 22, 1, are only two of the many examples of this. A change in the demand for the exchange of gold into other currency might make it necessary to alter the margin of profit of the money-changers. One of the letters of Symmachus of 384/5 A.D. tells us of just such a change. "Vendendis solidis, quos plerumque publicus usus exposcit, collectariorum corpus obnoxium est, quibus arca vinaria statutum pretium subministrat. Huic hominum generi taxationis exiguae nutanti divus frater numinis vestri tantum pro singulis solidis statuit conferendam, quantum sequitas illius temporis postulabat, ddd. imppp. sed paulatim auri enormitate crescente vis remedii divalis infracta est, et cum in foro venalium rerum maiore summa solidus censeatur, nummulariis pretia minora penduntur. Petunt igitur de aeternitate vestra pro ratione praesenti iusta definitionis augmenta, qui iam tanto oneri sustinendo pares esse non possunt. Haec est causa quaerimoniae, quam divinis sensibus vestris fides gestorum plenius intimabit; si petitionis genus probabile iudicatis, quaeso ut huic quoque parti praecepto mansuetudinis vestrae salubre remedium deferatur." *M.G.H., A.A.*, VI, pp. 303-4. On the identification of the *nummularii* and *collectarii* see von Premerstein in ed. Pauly-Wissowa, *Real-Encyclopädie der classischen Altertumswissenschaft*, IV, pt. I, cols. 376-7, s.v. *collectarii*. Cf. Theodor Mommsen, *Histoire de la monnaie romaine*, trans. Duc de Blacas (Paris, 1873), III, p. 173. Also see Cassiodorus, *Variarum*, I, 10 (*M.G.H., A.A.*, XII, p. 19) dated 507/511 A.D., in which Cassiodorus speaks of the solidus which the ancients valued at 6,000 denarii, so that like the sun it might represent the age of the world. Even though it is clear that this was not the value of the solidus in the sixth century, it does indicate that Cassiodorus understood that the ratio of the solidus to the denarius could be fixed by law and maintained at a given level.

³ Many earlier writers have assumed a variety of parallel standards to have been used by the Byzantine government. See Harold Mattingly, "The Monetary Systems of the Roman Empire from Diocletian to Theodosius I," *Numismatic Chronicle*, Series 6, VI (1946), p. 111, and A. Segrè, "Some Traits of Monetary Inflation in Antiquity and the Middle Ages," *Seminar*, I (1943), pp. 22-23. Heichelheim has assumed a system of parallel standards in all of his works.

It is impossible to judge exactly what was the nature of the change in the valuation of the small change to which John Malalas refers, but it does not seem as though it can justifiably be related to an incident recounted by Procopius. Procopius in the course of detailing the various devious methods used by Justinian to increase the profits from the customs and trade says, "Such is the way things were going as regards the administration of affairs. But I think that I should not omit to mention also what was done by the imperial pair with reference to the small change. For while the money-changers formerly were accustomed to give to those who bargained with them in exchange for one gold stater two hundred and ten obols, which they call *pholleis*, these persons, contriving private gain for themselves, had it arranged that only one hundred and eighty obols should be given for the stater. In this way they cut off the seventh part of the value of every gold coin of all men."⁴

This passage would, at first glance, seem to indicate that gold coins which had previously been issued to sell at two hundred and ten bronze folles were now intended to be evaluated at only one hundred and eighty folles. This would mean that the value of the follis was raised by one-seventh, but it is clear from the concluding sentence that what actually happened was that the value of the bronze pieces was not changed, and instead the value of the gold piece was lowered by one-seventh. It is, of course, obvious from this passage that Procopius did not fully comprehend the mechanics whereby the value of the fiduciary currency was determined. He simply did not understand that lowering the value of the gold piece as expressed in terms of folles did not affect the value of the subsidiary bronze coins as well, if the actual intrinsic value of the gold coin was lowered proportionately.

⁴ Procopius, *Anecdota*, XXV, 11-12. Ἀλλὰ ταῦτα μὲν τῇδε κατὰ τὴν πολιτείαν ἐφέρετο, ἃ δὲ καὶ ἐς τὰ κέρματα τοῖς βασιλεῦσιν ἐργασται οὐ μοι παριτέον οἶμαι εἶναι. τῶν γὰρ ἀργυραμοιβῶν πρότερον δέκα καὶ διακοσίους ὀβολούς, οὓς φύλλεις καλοῦσιν, ὑπὲρ ἑνὸς στατήρος χρυσοῦ προίεσθαι τοῖς ξυμβάλλουσιν εἰωθότων, αὐτοὶ ἐπιτεχνώμενοι κέρδη οἰκεῖα ὀγδοήκοντα καὶ ἑκατὸν μόνους ὑπὲρ τοῦ στατήρος δίδοσθαι τοῖς ὀβολούς διετάξαντο ταύτη δὲ νομίσματος ἐκάστου χρυσοῦ ἐβδόμην ἀπέτεμον μοῖραν πάντων ἀνθρώπων.

The translation is that given by H. B. Dewing in the Loeb Classical Library (Cambridge, Mass., and London, 1925), VI, pp. 295-297.

That this is what happened is clear from the third passage, which again is from the pen of Procopius. In the course of describing the horrid crimes perpetrated during the tenure of John Barsymes as treasurer for the second time, during the period from 547 to some time after 555 A.D., Procopius says, "And those who had been stripped of their money sat about in great sorrow, since he saw fit also to issue the gold coinage, not at its usual value, but reducing its value materially, a thing which had never been done before."⁵ This passage is probably to be connected with the same event as the preceding one, and it is obvious that it is a lowering of the value of the gold coins and not a change in the fiduciary subsidiary bronze coinage which is involved. This result could be achieved by the issuance of gold currency of lighter weight.

That the event recorded by Procopius is not the same as that preserved by Malalas can be shown by a comparison of the dates in each case. Malalas, it will be remembered, was describing something which transpired in 554 A.D. The date of the composition of the *Anecdota* is indicated four times in the course of the work as the thirty-second year of the reign of Justinian.⁶ Since Justinian counted his regnal years on all documents from 527 A.D., when Justin I died, this would place the date of the composition in 559 A.D., and it would seem possible that the events of 554 A.D. might be included. Justinian's active administration, however, began in 518 A.D., and if that were to be taken as the date from which Procopius began his counting of the regnal years it would follow that the *Anecdota* was composed in 550 A.D. Thus the events of 554 A.D. could not have been recorded in that work. It seems more likely, however, that the first view is correct, and that the date of composition was 559 rather than earlier, and there is therefore no inherent reason in that regard why the two authors could not have referred to the same incident. But in the first passage which was cited from the *Anecdota*, Procopius speaks of

⁵ Procopius, *Anecdota*, XXII, 38. Οἱ δὲ τὰ χρήματα περιηρημένοι ἐν πένθει μεγάλῳ περιεκάθηντο ἐπεὶ καὶ τὸ χρυσοῦν νόμισμα οὐχ ἤπερ εἰώθει ἐκφέρειν ἡξίου ἀλλ' ἔλασσον αὐτὸ καταστησάμενος, πρᾶγμα οὐδεπώποτε γεγονὸς πρότερον. The translation is that given by H. B. Dewing in the Loeb Classical Library (Cambridge, Mass., and London, 1925), VI, p. 267.

⁶ Procopius, *Anecdota*, XVIII, 33; XXIII, 1; XXIV, 29; 33.

the imperial "pair" in the plural and thus indicates that Theodora was still alive at the time. Theodora's death in 548, therefore, must be a *terminus ante quem* for the event. Since the same event is connected with the second tenure of John Barsymes as treasurer, it must be dated in 547/8. Only by presuming that Procopius erred in using the plural can it be assumed that both authors are discussing a single event of a temporary nature. This involves an unnecessary emendation of the text which would be unjustified.

It is more than mere coincidence that Procopius refers to a lowering of the value of the solidus by one-seventh and that that is approximately the amount by which at least some of the solidi that form the subject of this monograph were lightened. It seems obvious that Procopius is describing in somewhat colored terms the issuance of these solidi. Malalas apparently described a temporary administrative attempt to apply this new monetary system to the whole Empire though this is much more uncertain.

That Justinian as a result of his efforts to reconstruct the Roman Empire was consistently in financial difficulties is not in doubt. The expenditures of the government were enormous, and many attempts were made to increase the revenue of the Empire and to stretch the available amount of good currency as far as possible. Justinian's efforts in this regard with respect to the silk trade as well as his other sources of income have been adequately treated in a great number of secondary works. That the western trade of the Empire underwent a transformation at the same time is a matter that has not been discussed quite as completely. War with Persia had been an acute problem during the third and fourth centuries, but the situation on the eastern frontier seems to have been stabilized to a considerable degree after the death of Julian, and the fifth century was a period of relative quiet in that area. In the opening years of the sixth century, however, the problem reappeared in an aggravated form and remained an everpresent danger until the final victory of Heraclius in the seventh century. Of course the Persian difficulties in which the Empire was embroiled must have made the eastern trade more hazardous and difficult. The Persians were the intermediaries who transmitted the goods of the Far East to the Roman merchants. Negotiations such as were carried on with the peoples to the north as well as with the

Himyarites and Abyssinians to the south of the Persian Empire in order to secure alternative trade routes to the Far East cannot be interpreted purely in terms of Justinian's desire to insure that the Persians would be prevented from making a profit on all of the Byzantine eastern trade. Continued access to eastern sources of trade during the periods of Persian difficulties must have played a part in the calculations of the Emperor.

All historians are agreed that the financial difficulties of the emperors of the sixth and seventh centuries were very real. The sources are replete with tales which serve to illustrate this. Massive military endeavors, however, accentuated the declining financial structure of the Empire, but the difficulties facing the imperial government in the sixth century have their roots in a much earlier period. The Roman Empire was clearly in decline in the second half of the third century, and nowhere is this more lucidly shown than in the papyri from Egypt. The inflationary spiral of the late third century was not local in any sense, but it seems to have encompassed the entire Mediterranean world. The literature on this decline is so extensive and detailed that it would be a patent waste of space to retrace the ground that has been covered by others. What is important, however, is that the succeeding early fourth century was clearly a period of economic growth and recovery. The decline was largely arrested, and the evidence from Egypt is overwhelmingly in favor of a general revival at least during the first half of the century.⁷ Some of the towns which bordered the Fayûm were revived and showed signs of renewed vigor. The documents from the valley of the Nile itself show, if anything, an even healthier picture than in the Fayûm.⁸ A stable currency of both gold and silver was inaugurated, and the security of the frontiers was established by the armies which had been reorganized. But the recovery was only temporary, and the second half of the century as well as the dark fifth century show all of the signs of increasing dislocation. Many of the towns of Egypt which had recovered temporarily disappeared from the scene. But this time even the

⁷ A. E. R. Boak, "Irrigation and Population in the Fayûm, The Garden of Egypt," *The Geographical Review*, XVI (1926), pp. 353-364.

⁸ A. C. Johnson and L. C. West, *Byzantine Egypt: Economic Studies* (Princeton: Princeton University Press, 1949), p. 3.

frontiers of the Empire could not be adequately defended, and the Germanic tribes poured into the Roman world.

The appearance of the Germanic tribes on the Roman side of the *limes* was not without its effect even though there was a cultural continuum. Merchants of western origin had declined in importance during the period of the Roman Empire, and their position had been taken by easterners, Syrians, Jews, and Greeks.⁹ This process, which began quite early, however, was greatly accelerated by the Germanic invasions.¹⁰ The importance of merchants of eastern origin during the Merovingian period in Gaul is certainly more marked than during the preceding Roman epoch or the following Carolingian period.¹¹ This is not merely a quantitative but a qualitative point as well. The

⁹ M. Rostovtzeff, *The Social and Economic History of the Roman Empire* (Oxford: Clarendon Press, 1926), pp. 158 ff.

¹⁰ P. Lambrechts, "Le Commerce des ((Syriens)) en Gaule du Haut-Empire à l'époque mérovingienne," *L'Antiquité classique*, VI (1937), pp. 35-61, probably goes too far in maintaining that prior to the Germanic invasions the Gauls themselves carried on the trade in the western Mediterranean, but that in Merovingian times the orientals came into Gaul in numbers and replaced the western merchants who had been ruined by the economic difficulties of the third and fourth centuries as well as by the Germanic invaders. Cf. V. Pârvan, *Die Nationalität der Kaufleute im römischen Kaiserreiche* (Diss.: Breslau, 1909). G. I. Brătianu, "Une nouvelle histoire de l'Europe au moyen âge: La fin du monde antique et le triomphe de l'orient," *Revue belge de philologie et d'histoire*, XVIII (1939), pp. 252-266, maintains that the troubles of the third century caused a decline in the population particularly in the West and a consequent shift in the equilibrium of the Empire eastwards even more marked than before. The conquests of Islam, in his view, completed the process of the shift of the center of economic importance eastwards, while the antisemitism of the Byzantines resulted in a westward migration of the Jewish merchants which made possible the Carolingian economic stabilization at a lower peak than during the period of the Roman Empire.

¹¹ Paul Scheffer-Boichorst, "Kleinere Forschungen zur Geschichte des Mittelalters IV. Zur Geschichte der Syrer im Abendlande," *Mitteilungen des Instituts für österreichische Geschichtsforschung*, IV (1885), pp. 520-550; Louis Bréhier, "Les Colonies d'Orientaux en Occident au commencement du moyen-âge," *Byzantinische Zeitschrift*, XII (1903), pp. 1-39. Bréhier points out the increasing importance of the oriental communities of the West during the period of the Empire, and it is his contention that the Byzantine conquests in the West merely accentuated the growing importance of the orientals. Before the period of the Germanic invasions the orientals tended to assimilate into the communities within which they lived, but after that period they were continually noted as a separate entity. Also see C. Piton, *Les Lombards en France et à Paris* (Paris, 1892), pp. 4-6.

numbers of orientals cannot be estimated other than by making note of the fact that on certain occasions, such as the entrance of Gontran into Orleans, the three separate communities, Syrians, Jews, and Latins, are mentioned individually as though they were all of some size. A list of cities in which the orientals resided would not in itself be of any importance, but their growing influence is a matter that can easily be traced not only by their frequent assumption of the ecclesiastical posts of the West, such as the See of St. Peter, but even in the constant stream of art motifs and works which are oriental in origin.¹²

The natural concomitant of this growing importance of a non-native element in the life of western Europe, of course, was the gradual decline of the Gallo-Roman element to a point where it lost its identity in the *mélange* of the rising Germanic barbarians, or more properly it may be said the the Germans and the natives fairly rapidly approximated one another culturally and in other ways. The granting of the right of *conubium* among the Visigoths in the sixth century is simply a proof of the rapid romanization of the Germanic peoples throughout western Europe. Not only did the Germans adopt Roman culture and forms, but the native element in the population declined in self-consciousness at the same time, and the common ground was reached very quickly after the influx of barbarians ceased. This decline, however, did not cause a break in the unity of the Roman Mediterranean, and contacts with the seat of Byzantine culture were many. Internal decline was evident in the late fourth century, and the Germanic invasions hastened the process, so that the supremacy of the economic order of the East became more and more manifest. This internal decline is made somewhat more evident by the fact that in the areas which were conquered by the barbarians it was not the solidus which was the principal coin issued but the triens, which was only one-third of the Byzantine piece. The eventual cessation of coinage in gold in meaningful quantities for exchange is in great measure a result of this continuous decline which accompanied the

¹² Bréhier, *loc. cit.* Also see O. M. Dalton, *Byzantine Art and Archaeology* (Oxford: Clarendon Press, 1911), pp. 87–88 and Henri Pirenne, *Mohammed and Charlemagne*, trans. Bernard Miall (New York: W. W. Norton & Company, 1939), pp. 129–139.

fragmentation of the political structure, so that no state in western Europe was strong enough to guarantee currency for its coinage as Rome had done.¹³

The most outstanding feature of the early Middle Ages is this cultural and economic decline and the fusion of the Germanic and Roman peoples. Of course this aspect of life in the early mediaeval period did not proceed at a constant rate nor was it uniform throughout the West. Conditions north of the Loire reached a much lower point than those found in southern Gaul where the Germanic penetration was much less real. The Gaul described by Ammianus Marcellinus, however, was quite different from that described by Gregory of Tours. Roman civilization, it has been shown by Pirenne and Dopsch, did not disappear in one fell stroke, but certainly the decadence of ancient culture was accelerated during the bleaker periods.¹⁴ The Vandal conquest of North Africa must have been one of the events which accelerated this process of decline,¹⁵ and during the reign of Genseric Vandal fleets undoubtedly ravaged the shipping of the Mediterranean with impunity, but this was not a condition of any permanence. After the death of Genseric in 477 A.D. this momentary threat passed.¹⁶ The economic and basic cultural unity of the Mediterranean remained, but the supremacy of the East became ever more marked. Feuding and warfare punctuated the lives of the western Europeans, but the ubiquitous class of merchants continued to ply their trade so successfully that during the early fifth century the gold solidus seems to have become the standard coin in use in southern

¹³ Cf. Marc Bloch, "Le Problème de l'or au moyen-âge," *Annales d'histoire économique et sociale*, V (1933), pp. 18-24. Also see G. I. Brătianu, "La Distribution de l'or et les raisons économiques de la division de l'Empire Romain," *Études byzantines d'histoire économique et sociale* (Paris: Paul Geuthner, 1938), p. 75.

¹⁴ Henri Pirenne, *Mohammed and Charlemagne*, p. 119; O. M. Dalton, *Byzantine Art and Archaeology*, pp. 87-88.

¹⁵ Henri Pirenne, *Mohammed and Charlemagne*, pp. 28-29.

¹⁶ Archibald R. Lewis, *Naval Power and Trade in the Mediterranean A.D. 500-1100* (Princeton: Princeton University Press, 1951), pp. 18-20. Cf. Norman H. Baynes, "The Decline of Roman Power in Western Europe. Some Modern Explanations," *Journal of Roman Studies*, XXXIII (1943), pp. 29-35, and a review of books by Ferdinand Lot, Henri Pirenne and M. Rostovtzeff in *Journal of Roman Studies*, XIX (1929), pp. 224-235. Baynes contends quite wrongly that the Vandal fleet broke the unity of the Mediterranean world.

Scandinavia. The great period of this Scandinavian trade, however, lies in the years following 476 A.D. and before the accession of Justin II.¹⁷ These solidi probably came to Frisia by a route down the Rhine Valley and from Frisia were sent by sea to Scandinavia. Why the importation of solidi into Scandinavia ceased after the reign of Justinian has been the subject of much investigation and many hypotheses. Its importance for the theme of this monograph, however, lies in the fact that the actual distribution of solidi in Europe seems to show that in the period before Justinian the route was open to trade from Italy northwards through Mainz and down the Rhine Valley to the Frisian coast. This is the same route which was so closely related to the finds of light weight solidi.

In addition the coin finds may be said to reflect the intensity of the trade more clearly than anything else. Coin hoarding, of course, has been shown to mirror accurately the lack of political and economic stability. During periods of trouble the number of hoards buried rises as the inhabitants of the region affected attempt to preserve their wealth from marauders.¹⁸ Such a peak period of hoarding occurred in western Europe in the second half of the third century. In France, the period from 253–282 A.D., a space of only twenty-nine years, resulted in approximately forty-four percent of all of the hoards in that region listed by Bolin. In England and in Germany as well as in Austria the same phenomenon is evident.¹⁹ The stabilizing effect of

¹⁷ B. Nerman, *Die Völkerwanderungszeit Gotlands* (Stockholm, 1936), p. 59, and O. Janse, *Le Travail de l'or en Suède à l'époque mérovingienne* (Orleans, 1922), pp. 14 ff. give lists of finds of solidi from Scandinavia. Dirk Jellema, "Frisian Trade in the Dark Ages," *Speculum*, XXX (1955), pp. 20–22, gives a good short account of the problem and a summary of the literature concerning it.

¹⁸ Adrien Blanchet, *Les Trésors de monnaies romaines et les invasions germaniques en Gaul* (Paris, 1900), has shown this most conclusively.

¹⁹ Sture Bolin, *Fynden av romerska mynt i det fria Germanien. Studier i romersk och äldre germansk historia* (Lund, 1926), pp. 203–207. Alfons Dopsch, *Wirtschaftliche und soziale Grundlagen der europäischen Kulturentwicklung aus der Zeit von Caesar bis auf Karl den Grossen* (2nd ed.: Vienna, 1920–23), I, pp. 142–144, speaks of a distinct gap in the series of coins found in excavations near Roman forts after the middle of the third century. With the reign of Constantine, however, the series begins again. He uses this evidence to support the view that in the frontier lands there was a continuation of Roman settlement even during the period of the *Völkerwanderung*. Cf. *Ibid.*, pp. 296–297, where numismatic evidence of the same type is used to establish a greater age for some of the noble estates in Old Saxony.

the strong hand of Constantine is immediately evident in a sharp decline in the number of hoards buried during that reign. In Germany, the peak of activity in burying treasure occurred about the middle of the third century, and from that point on there was a sharp decline in the practice until the last years of the reign of Constantine. A rise during the reigns of Constantius II and Julian the Apostate is particularly marked in Germany and is also evident in England though the situation seems to have been stabilized in France so that a low point in hoarding was reached some time after 363 A.D. At the end of the century, however, there was a distinct rise in the number of hoards buried in England, Germany and France.

The pressure of the Germanic tribes increased sharply during the last years of the fourth century and the early years of the fifth century, and the economic conditions within the Empire declined. These were factors which made for greater dependence upon the use of gold rather than fiduciary money. At the same time there was a growing awareness on the part of the Germanic peoples of the monetary value of gold which led to a steady increase in its use among them. Silver coinage had fluctuated too much in value as a result of the financial difficulties of the emperors of earlier periods. As a result the marked preference for silver currency among the Germanic tribes, which had been noted by Tacitus, died away.²⁰ Thus it happened that the usefulness of gold currency was fully realized by the Germanic peoples during their invasions of the Empire. Long contact with the Romans had resulted in this. When they entered the Empire, of course, there was the steady process of romanization to give further impetus to the use of gold, if that were necessary. Pirenne clearly noted this romanization. Payments in terms of gold are common in the writings of Gregory of Tours, and the tomb of Childeric at Tournai revealed that this early Frankish king had hoarded a respectable number of gold coins.²¹

²⁰ Sture Bolin, *Fynden av romerska mynt i det fria Germanien*, pp. 286-298, traces this. Arnold Luschin von Ebengreuth, "Der Denar der Lex Salica," *Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften in Wien*, Phil.-hist. Klasse, CLXIII (1910), Abh. 4, pp. 8-9, pointed out that gold flowed from the Roman Empire into Free Germany in considerable quantities during the third and fourth centuries.

²¹ J. J. Chiflet, *Anastasis Childerici I Francorum regis, sive Thesaurus sepulchra-*

A recovery from the effects of the invasions and the economic decline, however, was imminent, and the first signs of this restoration appeared during the reign of Anastasius. His coinage was imitated in some quantity in the West, and it occurs in the hoard of Bresin in Germany and in a number of Scandinavian hoards. His coinage and the imitations of it also form an important segment of the hoards of Gourdon and Chinon which were actually buried during the reign of Justin I.²² But the largest increase in the number of Byzantine coins and imitations of them found in the West occurs for the period from Justinian through Heraclius. Boeles lists 208 coins, mostly of gold, found in Frisia. Ninety-five of these coins are clearly imperial gold or imitations, and better than half of these, or forty-six of them to be more exact, are of the period from Justinian through Heraclius. After that the Frankish currency seems to have held sway in Frisia.²³ Since many of the early imitations which are found probably come from Italy, it is clear that a route existed in the early years of the sixth century which brought a steady stream of coinage over the Alps northwards. The same situation is noted from a survey of the coins listed by Werner. In that instance 210 coins seen by Werner are listed from grave finds in Austrasia of the period from Valentinian I to Constans II. Of these by far the greatest number are from the period from the reign of Anastasius through that of Heraclius.²⁴

lis Tornaci Nerviorum effusus et commentario illustratus (Anvers, 1655), p. 252, claims that the tomb of Childeric, the father of Clovis, contained ninety solidi at the time of its discovery in 1653. Only three of these were supposedly of the Western Empire, and four-sixths of the total could be dated with certainty after 457 A.D. C. F. Keary, *The Coinages of Western Europe from the Fall of the Western Empire under Honorius to Its Reconstruction under Charles the Great* (London, 1879), p. 21, utilized this fact to point out that the Franks, even while confined to the region about the Scheldt, Oise, and Maus, were using the coinage of the Eastern Empire "whereas that of Southern Gaul, Spain and Africa copied types of Arles, Milan, Rome, and Ravenna."

²² These hoards and the pertinent literature are cited in Sawyer McA. Mosser, *A Bibliography of Byzantine Coin Hoards*, NNM, 67 (New York: The American Numismatic Society, 1935).

²³ P. C. J. A. Boeles, *Friesland tot de elfde eeuw. Zijn vóór- en vroege geschiedenis* (2nd ed.: 's-Gravenhage, Martinus Nijhoff, 1951), Bijlage VIII. It is interesting to note that in addition to one genuine solidus of Anastasius nine imitations of his coinage, three of which are probably from Italy, are also known to have been found in Frisia.

²⁴ Joachim Werner, *Münzdatierte austrasische Grabfunde* (Berlin and Leipzig,

It is vital to note that the gradual intrusion of Frankish currency during the seventh century into Frisia shows that the cities of the Middle Rhine, the Meuse, and the Moselle regions were in contact with the Frisian coast. The mints from those regions, which are, of course, closely associated with the trade route from Italy northwards are particularly well represented among the finds.²⁵ All of the numismatic and archaeological evidence seems to point to Frisia as a great point of diffusion for trade to the north and to the east as well as to England. The fact that something over 200 gold coins have been found within Frisia as compared with about 265 from the grave finds for all of Austrasia confirms this view.²⁶

This rather startling growth in Byzantine interest in the West is naturally to be associated with the Persian difficulties which became acute during the reign of Anastasius and continued to afflict the Romans until 639 A.D. During that period war between these two peoples was as much the order of the day as peace. Justinian must have fully comprehended the immense task which faced him, and he set up a military policy which involved taking the defensive role in one region and balancing it against an offensive drive in another. His attempt to reconstruct the Roman Empire around the Mediterranean necessitated that a defensive attitude be adopted towards the Persians. Justinian used the title *Imperator Caesar Flavius Iustinianus Alemannicus Gothicus Francicus Germanicus Anticus Alanicus Vandalicus Africanus Pius Felix Inclitus Victor ac Triumphator Semper Augustus*. The omission of the honorific *Persicus* is most noticeable. His claim to some of the other titles was hardly any more merited than would have been that of *Persicus*. The interest of the Emperor,

1935), pp. 107-133, in ed. Hans Zeiss, *Germanische Denkmäler der Völkerwanderungszeit*, III, issued by the Römisch-Germanische Kommission des Archäologischen Instituts des Deutschen Reiches. This predominance of coins of the sixth and early seventh centuries is further strengthened by adding those which Werner knew of only from secondary literature and which are not included in the 210 mentioned above. The total number of coins found would be about 266. *Ibid.*, pp. 135-136. Cf. Dirk Jellema, "Frisian Trade in the Dark Ages," *Speculum*, XXX (1955), p. 22.

²⁵ Dirk Jellema, "Frisian Trade in the Dark Ages," *Speculum*, XXX (1955), p. 22.

²⁶ *Ibid.*, pp. 15-24. This very excellent article provides more than enough proof for this statement.

however, had turned towards the western portions of the old Roman Empire, and his conquests must have stimulated the activities of the oriental merchants in that region. These merchants, however, had begun to play a more vital role in the economic life of western Europe as early as the reign of Anastasius and the beginning of the Persian troubles. The Byzantine fleet, which had been rebuilt, certainly controlled the entire Mediterranean in the period preceding the death of Heraclius, and as a direct result trade in the West became safer than it had been at any time since the Vandals reached Carthage.²⁷

Because of the importance of the western trade at a period when emphasis is most likely to be placed upon the Byzantine trade with the further orient it is necessary to point out that in the *Pragmatic Sanction* which Justinian addressed to the "Illustrious Grand Chamberlain Narses and to the Magnificent Antiochus, Prefect of Italy," specific provisions were promulgated to integrate the currency which had circulated there into that of the rest of the Empire. Section 20 of that document is very specific in that regard. Again it should be noted that in Procopius' description of the actions of the Emperor with regard to the two customs houses on the straits on either side of Constantinople he specifically speaks of merchants travelling between the capital and Italy or Libya.²⁸ Even the trade of the greatest of all the Mediterranean ports, Alexandria, with western Europe and particularly Italy seems to have been more active after the reconquest of the West by the Byzantines.²⁹ The fact that the communities of merchants in western Europe were composed primarily of Syrians, Jews, and Greeks, however, must have given Antioch and Constantinople a predominance which Alexandria could not challenge successfully even during the late sixth and early seventh centuries when trade relations between the Patriarch and the Pope seem to have reached a peak.

It is pointless to repeat all of the evidence collected by Pirenne and others for the existence of very significant sea trade between the two

²⁷ Archibald R. Lewis, *Naval Power and Trade in the Mediterranean A.D. 500-1100*, pp. 21 ff. This is, of course, a vital point in the Pirenne thesis.

²⁸ Procopius, *Anecdota*, XXV, 8.

²⁹ George R. Monks, "The Church of Alexandria and the City's Economic Life in the Sixth Century," *Speculum*, XXVIII (1953), pp. 349-362. The trade of this city was intimately associated with the Patriarchate of Alexandria.

halves of the Mediterranean. The case is very clear cut for a great expansion of that trade during the sixth and seventh centuries after a period of decline during the preceding epoch. It is, however, necessary to return to the subject of the trade route from Italy by land to the Frisian coast. This route actually never seems to have been closed entirely, and the light weight solidi are intimately associated with it. Mediaevalists who have restricted themselves largely to the literary sources have continually pointed to the paucity of pre-Carolingian documentation for the use of this route over the Alps.³⁰ A number of pilgrims, however, seem to have journeyed via this route to Rome, and the evidence is largely in favor of the view that as early as the second half of the seventh century pilgrimages were made between England and Rome which crossed the Frisian coast and occasionally followed the course of the Rhine.³¹ Use of a route over the Alps and down the Rhine for trade, however, is quite another thing than the occasional passage of a pilgrim or even a marauding army. In 539, Theudebert, the King of the Franks, entered Italy over the western Alps with an army of Franks, Burgundians and Alemanni. In 553 still another army of Alemanni and Franks crossed the Alps. In 568 the Lombards passed over the Alps, and the series of Lombard raids against Frankish territory carried parties over the Alps in the opposite direction and resulted in Frankish countermeasures. Such attacks over the Alpine passes were made throughout the last quarter of the sixth century. They must have interfered with trade to a considerable extent, and in this connection it should be noted that this appears to have been the period during which the Byzantines struck the fewest light weight solidi. The seventh century was a relatively quiet period along this mountain range. An agreement between the Franks and the Lombards left the southern passes in the hands of the latter while the more northerly ones were controlled by the Franks. Fortresses which had been a part of the old Roman system of military works guarding Italy and

³⁰ A. Schulte, *Geschichte des mittelalterlichen Handels und Verkehrs zwischen Westdeutschland und Italien mit Ausschluss von Venedig* (Leipzig, 1900), I, pp. 54-55.

³¹ Paul Kletler, *Nordwesteuropas Verkehr, Handel und Gewerbe im frühen Mittelalter* (Wien, 1924), pp. 26-28, cites quite a few such journeys which were made prior to the eastward expansion of the Carolingians.

had been used for the same purpose by the Ostrogoths were now strongly held by either the Lombards or the Franks.³²

Archaeology provides a more certain basis for the use of this trade route in pre-Carolingian times. The Germanic invasions did not result in a cessation of trans-Alpine trade. Theodoric's conquest of Italy and his preeminence among the Germanic kings provided a long period of peaceful relations with the more northerly peoples. The concentration of finds of Ostrogothic silver coins and those of the Exarchate of Ravenna in the middle Rhine region seems to be conclusive proof of a continuous use of that trade route during the pre-Carolingian era.³³

The route followed must have been one which crossed the Alps in the neighborhood of Lake Constance. Archaeological evidence gathered by Werner on the basis of finds of specific articles such as "Coptic" bronze vessels, ornamental gold crosses, and fibulae of a close-cell type shows a concentration in the region north of Lake Constance along the headwaters of the Danube.³⁴ The coins seem to have followed a more westerly route. Within the limits of southern and western Germany nineteen siliquae of Justinian struck in Ravenna as well as forty Ostrogothic siliquae have been found. The evidence provided by these finds as well as the coins struck in the area suggests that the route in question along the Rhine was of greater importance for the area to the east of the river than for the lands to the west of it. The amount of coinage struck in southern and western Germany during the sixth century must have been very small, if the number of pieces recovered that may possibly have been issued there can be used as indicative of the whole. Only a very few coins can be attributed to Rhenish mints, and even these are from sites such as Trier which are located on the Gallic side of the river.

³² Joachim Werner, *Münzdatierte austrasische Grabfunde*, pp. 24-27, traces the history of the Alpine region during this period in some detail.

³³ *Ibid.*, pp. 27-29, and plate 36, map 1. Werner contends that the *terminus ante quem* for the Ostrogothic silver coins to have been transferred northwards is 563 A.D., the year in which Narses siezed the passes over the Alps. The truce between the Franks and Byzantines of 560 A.D. must have made it just as easy for the coinage of Byzantine Italy to cross the Alps. Cf. *Ibid.*, pp. 12-13, where Werner points out that these coins of the Ostrogoths are found in the north of France, Belgium and Lotharingia as well.

³⁴ *Ibid.*, pp. 14, 27-29, 41-43, and plates 37 and 38. Also see Dirk Jellema, "Frisian Trade in the Dark Ages," *Speculum*, XXX (1955), p. 18.

In the seventh century Frankish mints seem to have been in operation at Windisch, Basel, Strassburg, Speyer, Worms, Alsheim, Mainz, Boppard, Andernach, Bonn, Cologne, Zülrich, Julich(?), Trier, and Pfalz near Trier, all sites on the left bank of the Rhine. Basel, Strassburg, Mainz, and Trier were the outstanding mints while the others only struck coins intermittently. Only occasionally are coins from these Rhenish mints found on the right bank of the river.³⁵

In the sixth century the mass of the currency in southern and western Germany on the right bank of the Rhine must have been composed principally of Italic coinage such as the Ostrogothic silver and the later silver currency of Justinian. In addition Ostrogothic and Byzantine gold, which must have crossed the Alps in the same body of commercial transactions which brought the silver, played a significant role. The coinages of the Rhenish and more distant Gallic mints did not occupy a significant position in the sites on the right bank. It can only be concluded that the commercial ties in this area on the right bank were much stronger with Italy than with the Gallic lands.³⁶

If anything, the seventh century shows an even more perceptible distinction between the regions to the right and to the left of the Rhine. It is true that since the importation of silver coinage had come to an end, the total number of coins found is much smaller, but the same phenomenon of a commercial connection with Italy rather than the Frankish realm on the left bank is noticeable. The occurrence of Anglo-Saxon sceattas and Frisian trientes in the middle Rhine region, however, marks even further the unity of the valley of that river in an economic sense at the later period. Merovingian coins at the same time are only occasionally found among the Alemanni, Franks, and Thuringians on the right bank and are totally lacking among the Bavarians.³⁷

Perhaps Werner has gone too far in explaining this division between Austrasia and Neustria in terms of the greater simplicity of economic

³⁵ The detailed evidence to support these conclusions is given in Joachim Werner, *Münzdatierte austrasische Grabfunde*, pp. 17-19.

³⁶ *Ibid.*, pp. 19-20.

³⁷ *Idem.*

life in Austrasia and the existence of an economy which made extensive use of barter rather than currency while in Neustria the Roman forms of commerce persisted with the monetary system.³⁸ The evidence presented by Dopsch in favor of a money economy on the right bank of the Rhine cannot be ignored.³⁹ His interpretation of the Germanic codes cannot be eliminated by citing the secondary literature. Certainly the right bank of the Rhine enjoyed a more primitive economy than Gaul proper, but it must not be forgotten that it too had been in close contact with the Roman world during the great days of the Empire. It is, however, more logical to note that the Rhine provides a significant barrier to lateral East-West trade while it is a highway for trade running North-South. This factor means, of course, that it was not in the main stream of Byzantine trade with Gaul, and that it occupied the position of a subsidiary artery of commerce. During the early mediaeval period traders from the East landing at Marseille would have utilized the Rhone, Garonne, Loire, and Seine much more frequently than the Rhine as a route for carrying on their transactions. The concentration of Merovingian mints and the activities of eastern merchants in western, central, and southern Gaul are much more heavily documented than along the distant Rhine. The connection of the Rhine with Italy, however, through the Alpine passes in the region of Lake Constance is clearly demonstrated from the archaeological and numismatic finds.

At the extreme continental end of this trade, of course, lay Frisia which, as has been pointed out, was the area from which the trade about the North Sea radiated. Boeles lists only twenty-six gold coins from Frisia which were struck before the reign of Anastasius. After that date the expansion in the use of gold in the area is easily traced by the great increase in the number of coins of the later period that have been found there. The evidence in favor of the importance of the light weight solidi is probably best shown by the fact that of the four coins of Heraclius and Heraclius Constantine listed by Boeles three are of the light weight series.

³⁸ *Ibid.*, pp. 20-22.

³⁹ Alfons Dopsch, *Wirtschaftliche und soziale Grundlagen der europäischen Kulturentwicklung aus der Zeit von Caesar bis auf Karl den Grossen*, II, pp. 526 ff.

During the period of Germanic expansion covering the fifth and sixth centuries the Frisians, like the Germans of the right bank of the Rhine, struck only conscious imitations of Byzantine coin types and never types of their own. During the later part of this period two new series of coins were issued which may be attributed to the Frisians. The first was a group which is identified by a symbol known as the "*boucle perdue*" which is frequently added to the legend. Originally this sign was a part of the fastening at the back of the imperial diadem or was visible as part of the offering in the hand of the Victory on the reverse of imperial trientes, but the Frisians seem to have developed their use of it from the pseudo-imperial Frankish trientes and the Ostrogothic imitations of Roman currency. About the year 600 A.D. the Victory on the reverse was replaced by a cross on Byzantine and imitative coinages. The second group of Frisian coins was recently discovered by Boeles. It was lacking the so-called "*boucle perdue*" and showed a greater stylistic affinity for the Frankish coins than for the Ostrogothic ones. Both groups of purely Frisian coins were issued very commonly in pale gold, and in one case the coin is of silver.⁴⁰

The commercial bond between Frisia and the Rhenish regions is easily established by the finds that have been made within Frisia of twenty-seven coins from Cologne, Mainz, Alsheim, and Worms as well as related currencies. In addition there were five coins from the mints on the Moselle and ten from those on the Meuse, including imitations.⁴¹ Thus of the 208 coins listed by Boeles, forty-two pieces come from the trade area formed by these river basins. At the same time it is to be noted that a few Frisian and Anglo-Saxon sceattas, probably of later date, are also found in the Rhineland.⁴² It is, however, to be expected that the direction of the flow of currency would be northward in this region. Frisia must be considered one of the more primitive

⁴⁰ P. C. J. A. Boeles, *Friesland tot de elfde eeuw*, pp. 258–268, also Bijlage VIII, Nos. 96–105.

⁴¹ *Ibid.*, Bijlage VIII, Nos. 145–186.

⁴² Joachim Werner, *Münzdatierte austrasische Grabfunde*, p. 17. Cf. P. C. J. A. Boeles, *Friesland tot de elfde eeuw*, pp. 359–381, and esp. pp. 374–375, for the view that the sceattas were created in the last quarter of the seventh century and are therefore evidence for this trade in the eighth century rather than the seventh.

areas in the West in Merovingian times, and it would therefore import rather than export currency. Boeles has presented an admirable case throughout his book on Frisia for the view that the Frisians were not at this time the great trading people and entrepreneurs of the North Sea littoral. That honor he would bestow upon the Anglo-Saxons.⁴³

It is important to remember that during the period covered by this study Frisia enjoyed independence, and that the expansion of the Frankish realm to include all of Frisia was not accomplished until Charlemagne's Saxon campaigns. Probably as early as 600 A.D., Maastricht on the Meuse became a Frankish town and the seat of a Merovingian bishop as well as a site for a Frankish mint. By the middle of the seventh century Dorestad was also the site of a Frankish mint, but in the early years of the last quarter of the seventh century the Frisians successfully expanded their realm to include both Utrecht and Dorestad. In 687, however, Pepin defeated the Frisian ruler Redbad and siezed Dorestad again, and between 691 and 695 A.D. Utrecht and the mouth of the Rhine were conquered by the Merovingians. There was a short rebirth of Frisian power after the death of Pepin, and Redbad reached Cologne with a Frisian fleet and defeated Charles Martel, but after the passing of Redbad the Franks returned to the offensive and again possessed themselves of the mouth of the Rhine.⁴⁴

The expansion of Frankish power during the seventh century was, of course, accompanied by the establishment of Frankish mints. That at Maastricht began to issue gold coinage about the year 600 and continued to do so until about the last quarter of the seventh century. A mint was established at Dorestad about the middle of the seventh century by the Maastricht mint-master Rimoaldus. It was a short lived mint, however, because of the conquests of Redbad, and it was only after 689 A.D. that it could be reestablished once again by drawing upon the resources of the mint at Maastricht. By 716 the

⁴³ P. C. J. A. Boeles, *Friesland tot de elfde eeuw*, pp. 359ff. Cf. Dirk Jellema, "Frisian Trade in the Dark Ages," *Speculum*, XXX (1955), p. 24, who seeks to divide the laurels between the Frisians and the Anglo-Saxons. Earlier writers cited by Boeles and Jellema have stressed the role of the Frisians.

⁴⁴ P. C. J. A. Boeles, *Friesland tot de elfde eeuw*, pp. 329ff., and Dirk Jellema, "Frisian Trade in the Dark Ages," *Speculum*, XXX (1955), pp. 15-17, trace the history of Frisia briefly during this period.

town was once again in Redbad's hands and the mint-master Madelinus II had passed away. The last issues of the series struck by him at Maastricht, however, were degenerate and were done in silver. During the first quarter of the eighth century gold was withdrawn from circulation as currency in all of Frisia, and it was replaced by silver.⁴⁵

Frisia was a vital link in the chain of find spots for the light weight solidi, and the finds are more closely concentrated there than anywhere else. Through the region along the right bank of the Rhine and particularly in Frisia it was a common practice to loop or pierce gold coins and to use them for ornaments. This practice is present in a significant number of instances among the light weight solidi. Perhaps this practice is in some measure connected with the fact that since the economy of the area was certainly below that established in Gaul proper, the true value of gold as a monetary metal was not as securely established. Using the coins for the manufacture of ornaments involves a change in the value of the coins. The people residing in this area were not as accustomed to the use of gold as those who lived on lands that had formerly been Roman. In Frisia at least thirty-one of the coins listed by Boeles from the reign of Anastasius and later were of poor alloy, and in addition there was one of that unusual series of early bracteates. A survey of the coinage from the Austrasian graves listed by Werner shows exactly the same phenomenon. The percentages of coins of poor alloy are too high to be meaningless. The Germanic peoples who inhabited the region were apparently quite unskilled in determining which were the coins of poor gold, for many of the pieces were merely plated copper, and in one instance there was even a core of lead.⁴⁶

⁴⁵ P. C. J. A. Boeles, *op. cit.*, pp. 287-308.

⁴⁶ It is interesting to note that Clovis bribed the *leudes* of Ragnachar with counterfeits of gilded copper (*aerum deauratum*). The fraud was only discovered sometime later, after the damage had been done. Gregory of Tours, *Historia Francorum*, II, 42 (*M.G.H., Scriptores rerum merovingicarum*, I, p. 105). In a later passage we are also told that the Saxons paid many thousand pieces of gold to King Guntram for the privilege of crossing the Rhone. Having crossed the river, the Saxons came into Auvergne in the springtime, and there they produced, instead of gold, stamped bars of bronze (*regulas aeris incisae pro auro*). The people who saw these bars did not doubt that they were tested and proven gold because of the fine color that had been given to

The light weight solidi, however, are found at the furthest extremity of this trade route, in England. Of course, the commercial connections between England and the continent were quite strong during this period. A type of *fibula* which may be distinguished from others is found in England and Frisia as well as near Cologne and Worms. The so-called "Coptic" bronzes extend over the entire route from Italy down the Rhine. Other objects such as a clamped saucer from the lower Rhine are also found in Kent, and Anglo-Saxon type belt plates occur along the Rhine. Pottery and glassware as well as cruciform brooches serve to indicate the strength of this trade.⁴⁷ The bond between the continent and Britain actually appears to have been strengthened during the period of the Anglo-Saxon invasions, and a common cultural pattern is easily seen in Frisia and England.⁴⁸ The British contacts with the continent in the early Middle Ages have been covered in sufficient detail by many authors, and it is pointless to repeat such well-known material.⁴⁹

Much time has been spent establishing on a sure footing the continuous existence of a subsidiary trade route from Italy over the Alps and down the Rhine Valley to Frisia and England. The character of trade along this route was influenced by the more primitive

the metal by some clever process. Many persons were tricked by this device and gave their good money for the bronze and were reduced to poverty. *Ibid.*, IV, 42 (*M.G.H., Scriptores rerum merovingicarum*, I, p. 177). Cf. Procopius, *De Aedificiis*, I, 11, 4 (ed. Teubner, III, pt. II, pp. 1718f.). Procopius speaks of a bronze equestrian statue of Justinian in the Augusteum at Constantinople and says that this metal was in color softer than pure gold and in value not much less than an equivalent weight of silver. See Theodor Mommsen, *Histoire de la monnaie romaine*, trans. Duc. de Blacas, III, p. 47, note 1, for another interpretation of the passage from Procopius. A number of hoards also, such as that of Dortmund, which was discussed in the first chapter, indicate that the Germans were not too wise in distinguishing good gold from bad.

⁴⁷ Dirk Jellema, "Frisian Trade in the Dark Ages," *Speculum*, XXX (1955), pp. 15-17, has gathered the evidence to indicate these trade connections.

⁴⁸ P. C. J. A. Boeles, *Friesland tot de elfde eeuw*, pp. 207ff.

⁴⁹ C. H. V. Sutherland, *Anglo-Saxon Gold Coinage in the Light of the Crondall Hoard* (London: Oxford University Press, 1948), pp. 22-30, gives an account of the numismatic and archaeological evidence to substantiate the resumption of the flow of gold into Britain after the establishment of the Anglo-Saxons. Paul Kletler, *Nordwesteuropas Verkehr, Handel und Gewerbe im frühen Mittelalter*, pp. 15-19, cites a good deal of evidence from the literary sources indicating the close connections between England and the Continent.

condition of the peoples on the right bank of the Rhine through whose territory this trade passed. These people used gold and engaged in monetary transactions, but the coins were also utilized as ornaments to a greater degree here than elsewhere. The inhabitants of the region retained the use of silver currency in an active sense while it was lost throughout most of the Roman world. This is shown by the finds of Ostrogothic and Byzantine silver coins. Their knowledge of gold as a currency medium was limited, and a great many pieces of poor quality, plated, or heavily alloyed, were in circulation.

Into this trade the Byzantine light weight solidi were introduced. Originally they seem to have been struck in Constantinople and sent to Italy from whence they passed over the Alps and down the Rhine. This move was part of the Byzantine design to increase the profits from the western trade. The Persian difficulties which began in the early sixth century turned the traders of Constantinople in increasing numbers westwards. As early as the reign of Anastasius a marked growth is clearly seen in the activity of the oriental traders in the West. The colonies of eastern merchants who were resident in western Europe and who preserved their identity jealously after the settlement of the German barbarians made this expansion easier in the more romanized parts of Europe. During Justinian's reign this activity increased even more sharply since it was aided and abetted by the victories of Byzantine arms. Negotiations with the Himyarites to the south of the Persian Empire and the Turkic peoples to the north during the reign of Justinian could not have compensated for the severe setback received by the eastern trade of the Byzantines as a result of the Persian wars. The importance of trade as a factor in Justinian's defensive wars against the Sassanians can be noted by simply reading Procopius' account of the events. Under these stresses the imperial government sought to cultivate trade in the West through all of the available channels. Procopius who served in Italy on the staff of Belisarius must have been aware of what was transpiring there even after he left as a direct result of his connections with the military men. Therefore it is in his writings that the striking of light weight solidi is mentioned.

It was probably in 547/8 that Justinian introduced these coins for use along this specific trade route. Perhaps the coins were shipped

into northern Italy directly from the mint; certainly they were not used throughout the Empire. A purely local situation was answered by the striking of this series of coins. It may be, however, that an attempt was made to introduce their use into Antioch, an emporium of western trade, during the reign of Justinian, and that John Malalas has recorded the convulsions of the populace which greeted the proposal. If that is so, and it is purely hypothetical, the attempt was not successful, and Justinian quickly reversed himself. It may well be that the few light weight solidi marked OB•+•, OB+•, and OB‡ issued by Justinian represent a part of that move to introduce this currency into the western trade at Antioch because these marks are clearly associated very strongly with Antioch in the late sixth century.

Failure to introduce light weight coinage into the main body of western trade that originated in Antioch in the reign of Justinian, if the attempt to do so was made, was not permanent. During the reign of Justin II, Antioch and its environs included at least one source of these light weight solidi. The Hama hoard shows conclusively that in the reign of Justin II the mint of Antioch issued light weight solidi. These new light weight solidi were apparently used in the extensive trade with the cities of southern France, and some of them found their way into the Balkan peninsula. That they are found in the Balkans is not in the least surprising, if the original purpose of their manufacture was trade with essentially underdeveloped peoples in the West. It is certainly not wise to place too much weight upon three individual coins found in the Balkans, but it would be equally foolish to maintain that their existence there was inexplicable in terms of the proposed thesis of this monograph. Aside from the mere fact that coins are extremely mobile and are constantly being transported from one locale to another, it must be noted that the numismatic evidence is quite conclusively in favor of a great expansion of trade between the Byzantines and the more primitive Balkan peoples during the sixth and seventh centuries.⁵⁰ The Slavic tribes and their Avar allies

⁵⁰ C. Moisil, "Sur les monnaies byzantines trouvées en Roumanie," *Bulletin de la Section Historique, Académie Roumaine*, XI (1924), pp. 207-211; D. Csallány, "Byzantine Money in Avar Finds," *Acta Archaeologica Academiae Scientiarum Hungaricae*, II (1952), pp. 235-255 (in Russian with a French summary); L. Huszár, "Das Münzmaterial in den Funden der Völkerwanderungszeit im mittleren Donaubecken," *Acta Archaeologica Academiae Scientiarum Hungaricae*,

who were engaged in raiding the Balkan provinces of the Empire were in an even lower stage of development than the Germanic tribes of southern and western Germany. Trade in the Balkans was certainly not as significant as trade in western Europe, but the expansion of that Balkan trade was greatest during the period when light weight solidi were being issued. It is conceivable that a few of the light weight solidi were introduced into the Balkans for that trade, but this is by no means a necessary conclusion.

On the other hand the evidence that light weight gold was introduced into the main body of western trade along the valley of the Rhone in the reign of Justin II is well attested.⁵¹ It is quite true that there have been no finds of authentic Byzantine light weight solidi made within the area of Gaul about the Rhone, but a series of so-called pseudo-imperial gold coins of western manufacture which utilized approximately the same weight standard is known.⁵² It is

V (1955), pp. 61-109. In this same connection the rather acute observations of Peter Charanis based upon the excavation coins found at Corinth and at Athens seem to support increased economic activity at those two cities during the period from Justinian to Constans II. Peter Charanis, "The Significance of Coins as Evidence for the History of Athens and Corinth in the Seventh and Eighth Centuries," *Historia*, IV (1955), pp. 163-172.

⁵¹ It should be remembered that Gregory of Tours, *Historia Francorum*, IV, 40 (M.G.H., *Scriptores rerum merovingicarum*, I, p. 173) accuses Justin II of cupidity. The mere fact that a Byzantine emperor collected taxes by a more efficient system than was current within the Frankish state would be enough to gain him such a description in the West. Still it is interesting that light weight solidi were introduced into Gaul during the reign of the very man who was so marked by Gregory of Tours. John, the Pope of Ephesus, in the reigns of Justin II and Tiberius II Constantine, also has some very unpleasant things to say about Justin II and Sophia. The distinct impression is given that Justin II was miserly and accumulated a hoard of precious metals while Tiberius II Constantine was by nature very generous. Ed. E. W. Brooks, *Iohannis Ephesini Historiae Ecclesiasticae Pars Tertia*, bk. III, c. 2 ff., in the series *Scriptores Syri* (vol. 55) in the *Corpus Scriptorum Christianorum Orientalium* (vol. 106) (Louvain: Imprimerie Orientaliste L. Durbecq, 1952), pp. 88 ff.

⁵² The latest work on these pseudo-imperial coins from Gaul is S. E. Rigold, "An Imperial Coinage in Southern Gaul in the Sixth and Seventh Centuries," *Numismatic Chronicle*, Series 6, XIV (1953), pp. 93-133. See also Maurice Prou, *Catalogue des monnaies françaises de la Bibliothèque Nationale. Les Monnaies mérovingiennes* (Paris, 1892), pp. xxix-xxviii; and Arnold Luschin von Ebengreuth, "Der Denar der Lex Salica," *Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften in Wien*, Phil.-hist. Klasse, CLXIII (1910), Abh. 4, pp. 22-39.

quite correct that typologically these pseudo-imperial gold coins are not imitations of contemporary Byzantine pieces, and it is also true that the trientes of the pseudo-imperial series are much more common than the solidi whereas in the authentic Byzantine series only solidi are known. There is, however, a satisfactory explanation of this phenomenon. By the mid-sixth century the triens had become the standard coin throughout the West. Nothing would be more logical for the moneyers of southern Gaul than to apply the new standard in terms of the coins in common use as well as in the series of solidi. The question of types is also susceptible of similar explanation. Justinian had abandoned the three-quarter face portraiture with the spear lying transversely on the shoulder about 539 A.D., and this type did not reappear on the regular Byzantine issues until the reign of Constantine IV Pogonatus. The three-quarter face bust, however, was the type utilized for the pseudo-imperial pieces. Since the type itself was quite commonly used throughout the length and breadth of the civilized world from the reign of Constantius II there can be no doubt that it was better known in the West than the new portraiture introduced by Justinian.⁵³ Thus the inhabitants of Gaul were given a coinage with types that were not remarkably different from those to which they had become accustomed, but these new coins bore marks of value which indicated that they were clearly derived from the authentic Byzantine light weight series insofar as the weight standard was concerned. The solidi were worth twenty-one siliquae and the trientes were valued at seven siliquae. That, of course, is the most essential feature of the relationship between these new Gallic pieces and the light weight Byzantine solidi.

Other aspects of the history of the pseudo-imperial coins point to the same close relationship with the Byzantine solidi. The pseudo-imperial coins reflect the same tendency to move northwards that was so noticeable in the case of the Byzantine solidi from the region of the Rhine. The North was less highly developed than the South. A goodly number of the hundred or so specimens of the pseudo-imperial coins have been found in Britain and other northern areas. Thus some of the pseudo-imperial pieces have been recovered in the hoard from

⁵³ The reverse type of the pseudo-imperial coins is a cross surmounting a small globe. There is no true prototype for this in Byzantine coinage.

Sarre, near Reculver, in Kent and in the hoard from Nietap. They also occurred in the Sutton-Hoo ship burial and in the Wieuwerd hoard as well as in the Bilgaard and Hichtum terps in Frisia. This would seem to be another instance of the attraction of the more Germanic, and consequently less highly developed areas, for light weight gold currency.

Pseudo-imperial gold was issued regularly at Marseille, Arles, Uzès, and Viviers and intermittently at Venasque, Die, Valence, Vienne, and possibly Gap as well. All of these cities, of course, are located in the Rhone Valley, and this valley was a major artery of trade from the Mediterranean littoral into the interior. From the sea ports along the coast goods were moved up the Rhone into the heart of Gaul, and the network of other rivers throughout the country made for relatively easy communications with the other parts of the land.

It seems most likely that this pseudo-imperial currency of Gaul was first issued during the last years of the reign of Justin II. Rigold suggests that it was begun about the year 574 A.D. Five trientes are known which were struck in the name of Justin II, and since they reveal a similarity to the earliest pseudo-imperial issues in the name of Maurice, they may confidently be placed quite late in the reign. The reign of Tiberius Constantine is represented by a single solidus struck at Arles and recovered with the hoard of Wieuwerd, and a single triens which may have been struck at Uzès. Since the mints of Marseille, Arles, and Viviers were represented on the five trientes of Justin II, it can be seen that the coinage of this variety was known over half the distance between Marseille and Lyons, but it was not quantitatively very important as yet. The great period for the striking of these Gallic coins was the reign of Maurice Tiberius. Since on these pseudo-imperial pieces the Emperor's name is given as MAVRICIVS Tib or just MAVRICIVS rather than always Tib MAVRICIVS, they, as well as the authentic Byzantine light weight issues in his name, must have been struck in 583 A.D. or later. Pseudo-imperial coinage in the name of Maurice Tiberius is particularly plentiful, and it is clear than even during the reign of Phocas and the early years of the reign of Heraclius only a very few gold pieces of this series were issued in the names of these rulers. Instead the name of Maurice was revived, and two groups of coins which were issued

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posthumously in his name can be distinguished. By 616, however, the last traces of the independence of the cities in southern Gaul had been eradicated, and the pseudo-imperial series was replaced by one of royal origin which bore the royal effigy but emanated from the same area.

Historically the series of pseudo-imperial coins reflects the political influence of the Byzantines in the cities of the Rhone Valley. The relationship between the various Frankish rulers such as Sigibert, Childebert, and Chilperic and the Byzantine emperors were never as close as during the years from about 584 to 594. Subsidy payments for Frankish aid against the Lombards were regularly made, and as late as 601 A.D., when the third Exarch of Ravenna, Callinicus, renewed the struggle against the Lombards, contacts with the Franks were necessary. In 606, however, a truce with the Lombards marked the final end of the effort by the Byzantine to carry offensive action against the Germanic barbarians. The decline of Byzantine influence was a concomitant of the enlargement of the realm of Chlotar II, the successor of Chilperic in Neustria, as an independent sovereign. In 613 Chlotar had seized all of Gaul as his own, and it was not long before he imposed his savage rule in the Rhone Valley as surely as elsewhere in Gaul.⁵⁴ There is thus a connection in time between the decline of the efforts of the Byzantine rulers against the Lombards, the striking of the pseudo-imperial series in southern Gaul, and the rise of the realm of Chlotar II.

⁵⁴ The connection between the historical situation and the pseudo-imperial coinage is adequately established in greater detail by S. E. Rigold, "An Imperial Coinage in Southern Gaul in the Sixth and Seventh Centuries," *Numismatic Chronicle*, Series 6, XIV (1954), pp. 93-133. Further discussion of incidental features regarding the pseudo-imperial coins, such as the meaning of these coins in connection with the expedition of Gondovald, is not pertinent to the main thread of the argument. The earlier view of Luschin von Ebengreuth, "Der Denar der Lex Salica," *Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften in Wien*, Phil.-hist. Klasse, CLXIII (1910), Abh. 4, pp. 28 and 38, was that the trientes in Gaul were first lightened to seven and one-half siliquae, and that only after 582 A.D. were they lowered still further to seven siliquae. The evidence cited to support this is very weak. Luschin von Ebengreuth, *op. cit.*, p. 39, also held that during the reign of Chlotar II the standard was lowered to twenty siliquae per solidus, but his argument is not completely convincing. The fact that most Merovingian trientes cannot be dated as accurately as other coins increases the difficulty inherent in the subject.

The success of the Frankish king in establishing his authority in southern Gaul is accurately reflected in the replacement of the imperial effigy and name by that of the king. A new weight standard had been introduced in the south, and gradually, but surely, it spread northward. Typologically, as well as in the matter of weight, the pseudo-imperial coins were the prototypes of most of the later Merovingian pieces. The "anonymous" local coinages which are so plentiful were largely produced in imitation of the light weight pseudo-imperial currency.

It can be said without fear of dispute that the Roman experiment with the use of light weight gold currency was a complete success in the field of external trade. The secondary trade artery along which most of these coins are found remained somewhat backward as compared with the more romanized sections of Europe for a considerable period of time as shown by its attraction of the pseudo-imperial pieces. This, however, is only a subsidiary aspect. Gold coinage of lighter weight made it possible to use less of the precious metal which the Byzantines treasured so closely to carry on their western trade. The tendency in western Europe in the early mediaeval period was consistently towards lighter and smaller gold coins as shown by the adoption of the triens as the common gold piece rather than the much more precious solidus. Economic decline gave gold coins a much greater purchasing power, and as a result the lighter coins could perform the economic functions which had required solidi of full weight during earlier periods. Even after the peoples of the West were fully cognizant of the change which the Byzantines had introduced into the gold coinage used in external trade these advantages still remained. It must not be forgotten that the lighter weight gold standard was quickly adopted by the cities of the southern Gallic region, and from there it spread throughout the Frankish realm and the rest of the European successor states. As long as the Byzantines had an active interest in the western trade the adoption of this lighter standard made it possible for them to use a smaller amount of gold for their transactions, and at the same time it brought the gold coinage which they were using in this trade into direct alignment with the prevailing trend of monetary policy among the peoples of the West including the Franks, Suevi and Visigoths, who adopted the lighter standard.

But the very success of this Roman innovation created a gap between the currency of Gaul, which rapidly influenced the coinage of the remaining peoples of western Europe, and that of the Byzantine Empire in its entirety. Even in Italy, the *Pragmatic Sanction* issued by Justinian had created a common currency acceptable for the entire realm and therefore different in standard from the more recent Merovingian pieces. Recently conquered provinces were rapidly integrated into the economic life of the Byzantine Empire, and the commercial activities of the merchants engaged in purely internal trade were geared to the use of a solidus of twenty-four carats. There is literary proof that the light Frankish gold was not permitted to circulate within the Byzantine Empire. St. Gregory, in a letter to Dynamius, the Patrician of the Gauls, mentions a sum of four hundred *Gallicanos solidos* which are obviously different from the imperial variety.⁵⁵ St. Gregory was merely recognizing the distinction between imperial and Gallic solidi in the last decade of the sixth century. In a second letter written about two years later the same Pope speaks of the "*solidi Galliarum, qui in terra nostra expendi non possunt, apud locum proprium utiliter expendantur.*"⁵⁶ This can only refer to the pseudo-imperial coinage issued in the Rhone Valley. Since this coinage was on approximately the same weight standard as the authentic Byzantine light weight gold currency, it is obvious from the literary evidence as well as from the list of sites where light weight solidi have been found that they were not intended for general use within the Empire. Gold, on the other hand, would never have been used for a currency which might be limited to a particular market place such as Antioch. Only foreign trade with western Europe, a trade in which Antioch played such an important part, provides the explanation for the nature and the locations of the finds of this light weight coinage and its imitations.

The coinage of pseudo-imperial gold in southern Gaul ceased during the reign of Heraclius, and the influence of the imperial government in Gaul declined sharply at the same time. It was at

⁵⁵ Gregory I, *Registrum*, III, 33 (*M.G.H., Epistolae*, I, p. 191). The letter is dated by the editors as having been written in April 593.

⁵⁶ Gregory I, *Registrum*, VI, 10 (*M.G.H., Epistolae*, I, p. 389). The editors date this letter as having been written in Sept. 595.

precisely the same instant that the pressure of the Persians reached the zenith. Coinage of light weight solidi at Antioch had come to an end before the reign of Phocas. During the reign of Heraclius, Antioch was actually seized for a short time by the Persians. Antioch, Damascus, Jerusalem, and even Egypt were temporarily held by the Persians. Coevally the Avars launched an attack against the city of Constantinople, and Heraclius pondered the wisdom of flight to Africa. Fortunately the Avar attacks were a purely temporary phenomenon, and the trade in the Balkans was not seriously hampered. The hoards and finds from the Balkans show that the Byzantine emphasis on trade there continued through the reign of Constantine IV Pogonatus. Trade with the East, however, must have been seriously affected by the Persian wars which punctuated the reigns of Phocas and Heraclius during the first quarter of the seventh century. The Byzantine victory at the Battle of Nineveh which was followed by the death of Chosroes and a series of dynastic convulsions within Persia exhausted the Persians and made it possible for the Byzantines to conclude a very favorable peace.

During the reigns of Phocas and Heraclius, as the Frankish realm was expanding under Chlotar II and Byzantine influence waned in Gaul, the number of light weight solidi issued by the Byzantine government appears to have increased. The subsidiary trade route along the Rhine was probably used to a greater degree than in the reigns just preceding that of Phocas. Certainly the majority of the Byzantine coins found in the sites along this route were struck in the reign of Heraclius. Thus it seems obvious that while Byzantine influence in southern Gaul was paramount there was no need to exert great efforts along this subsidiary route, but when the Frankish kings had complete control and the Persian difficulties were pressing, the imperial government attempted to extend its activities along the Rhine.

It is possible that the same forces which necessitated the increased activity of the Byzantines in the West along a subsidiary trade route also created the need for an expansion of trade in southern Russia. Russian museums contain a startling number of light weight solidi. Gold coins, however, are marked by extreme mobility in the hands of collectors, and it is unsafe to make any deductions on the basis of

specimens in museums. Certainly the reigns of Constans II and Constantine IV Pogonatus witnessed the use of these coins in the Ukraine as shown by the hoards. The movements of the Bulgars were probably the factor that made for an end of Byzantine efforts at the use of light weight solidi in southern Russia. A new power in the form of the Khazar state was being erected in southern Russia, and the Byzantines dealt with the Khazars on different terms.

Whatever the basic causes, the Islamic conquests, the decline of stability in Gaul and the later growth of the power of the Mayors of the Palace, the Bulgar pressure in the Balkans, and a succession of Byzantine emperors of limited ability about the end of the seventh and the beginning of the eighth century, there can be no doubt that the concerted effort at building up the trade of Byzantium with the West was over by the reign of Constantine IV Pogonatus. It was indeed declining sharply as early as the reign of Heraclius. Of course it did not cease abruptly and completely, and some articles which were necessary for maintaining the prestige of the chancelleries of the western monarchs or the church continued to be imported, but the fact that Byzantine hoards and coins no longer occur with any frequency cannot be denied. Byzantine policy, as has been recognized by all Byzantine historians, was different in the eighth and ninth century from that of the period from Justinian through Constantine IV Pogonatus.

The Pirenne thesis has been commented upon by a host of historians and mediaevalists of such stature as Lopez, Dennet, Baynes and many others, who have modified it in many respects. Many authors, of course, have gone so far as to reject that thesis completely. The subject of this monograph, however, is much less extensive than the external trade of Gaul during the Middle Ages. Most of the products in question in any discussion of the Pirenne thesis were controlled by the Islamic successors of Byzantium in the near East after the reign of Heraclius. Discussion of many other factors than the finds of Byzantine coins in the West must enter into a complete analysis of the Pirenne thesis. The hypothesis propounded in connection with the light weight solidi, it is true, is of some importance with regard to that thesis, but it is in no sense a broad commentary. Carolingian economic conditions are not pertinent to a discussion of the solution

of the problem of the light weight solidi, but a complete agreement on the nature of the Carolingian world is vital to any discussion of Pirenne's views. It is precisely in that connection that Pirenne and Dopsch are most clearly in disagreement. The numismatic and archaeological evidence presented here adds a new feature to any discussion, however, by showing that for a period of time which coincides with the growth of the Persian menace in the sixth and seventh centuries the Byzantines assiduously attempted to build up their external trade with peoples at a lower stage of development. That effort ended with the reign of Constantine IV Pogonatus, and the nature of international trade necessarily changed.

ABBREVIATIONS USED IN THE CATALOGUE

Akerman	J. Y. Akermann, <i>A Descriptive Catalogue of Rare and Unedited Roman Coins from the Earliest Period of the Roman Coinage to the Extinction of the Empire under Constantine Paleologus</i> (London, 1834), II.
Bauer	N. Bauer, "Zur byzantinischen Münzkunde des VII. Jahrhunderts," <i>Frankfurter Münzzeitung</i> , II, No. 15 (March 1931), pp. 227-229.
Belfort	A. de Belfort, <i>Description générale des monnaies mérovingiennes par ordre alphabétique des ateliers</i> (Paris, 1894), IV.
BMC, Byz.	Warwick W. Wroth, <i>Catalogue of the Imperial Byzantine Coins in the British Museum</i> (London, 1908), 2 vols.
Boeles	P. C. J. A. Boeles, <i>Friesland tot de elfde eeuw. Zijn vóór- en vroege Geschiednis</i> (2nd ed.: 's Gravenhage: Martinus Nijhoff, 1951), Bijlage VIII.
Brüder Egger Sale, 21 Nov. 1898	<i>Auctions-Catalogue der von dem verstorbenen Herrn Karl Latour v. Thurmberg k. k. Hofrath und Direktor der k. k. Lotto-Direction i. P. in Wien hinterlassenen Münzen- und Medaillen-Sammlung</i> (Wien: Brüder Egger, 1898), pt. I.
Brüder Egger Sale XL, 28 Nov. 1904	<i>Auctions-Catalogue der Sammlung griechischer, römischer und byzantinischer Münzen des Herrn Theodor Prowe in Moskau</i> (Wien: Brüder Egger, 1904).
Cahn Sale 75, 30 May 1932	<i>Adolph E. Cahn Versteigerungs-Katalog 75. Antike Münzen, griechische Münzen aus ausländischem und norddeutschem Besitz. Das fürstlich fürstenbergische Münzkabinett zu Donaueschingen. Die Münzen der römischen Kaiserzeit aus der Sammlung des Justizrats Dr. E. J. Haeberlin</i> (Frankfurt a. M., 1932).

- Canessa Sale, 28 June 1923 *Collezione del fu Comm. Enrico Caruso. Monete e Medaglie in Oro, Greche, Romane, Bizantine, Medioevale e Moderne, Italiane estere Medaglie Papali, Italiane e Estere* (Paris, Naples, New York: C. & E. Canessa, 1923).
- Coin Galleries Sale, 17 Aug. 1956 *Coin Galleries Mail Bid Sale. United States, Foreign, Ancient Coins. Numismatic Library. Closing Date August 17, 1956.*
- Glendining Sale, 8 Dec. 1922 *Catalogue of a Very Valuable Collection of Byzantine Coins Formed in the XVIIIth Century – The Property of a Foreign Prince.* Hugh Goodacre, *A Handbook of the Coinage of the Byzantine Empire* (London: Spink and Sons, Ltd., 1928).
- Goodacre
- L. & L. Hamburger Sale, 24 Oct. 1898 *Catalogue der antiken Münzen, der Münzen von Baden, Braunschweig, Hanau, Lippe, Nassau, Sachsen, Schwarzburg, Württemberg, Italien, Spanien etc. aus dem Seltenheitscabinet eines berühmten Sammlers* (Frankfurt a. M.: Buchdruckerei Louis Golde, 1898).
- Hess Sale, 24 May 1886 *Sammlung Theodor Rohde: Römische Münzen, byzantinische Münzen, Ostgothen, Westgothen, Vandalen, Venetianer, Ungarn, Siebenbürger und Aurelian Doubletten Sammlung* (Frankfurt a. M.: Adolph Hess, 1886).
- Hess Sale, 30 April 1917 *Sammlung des Herrn Johann Horsky k. k. Baurat, Ritter P. P. in Wien. Antike Münzen, Griechen – Römer – Byzantiner. Numismatische Bibliothek* (Frankfurt a. M., 1917).
- Hess Sale 194, 25 March 1929 *Sammlung Vogel, Griechen, Römer, Byzantiner, Brakteaten, Medaillen* (Frankfurt a. M., 1929).
- Hess Sale, 24 Nov. 1937 *Sammlung von Goldmünzen* (Lucerne, 1937).
- Hirsch Sale XVIII, 27 May 1907 *Auctions-Catalog der bedeutenden Sammlung römischer und byzantinischer Münzen des Herrn Dr. Friedrich Imhoof-Blumer in Winterthur sowie einer ausgewählten Samm-*

- lung griechischer Münzen aus dem Besitze eines auswärtigen Diplomaten u. A., (Munich, 1907).
- Hirsch Sale XXIV, 10 May 1909 *Sammlung Consul Eduard Friedrich Weber† Hamburg. Zweite Abteilung: Römische und byzantinische Münzen. Nachtrag griechische Münzen. Münzgewichte. Numismatische Bibliothek* (Munich, 1909).
- Hirsch Sale XXXI, 6 May 1912 *Griechische, römische und byzantinische Münzen aus dem Besitze von Commerzienrat H. G. Gutekunst in Stuttgart, Albert Niess in Braunschweig, T. W. Barron, Yew Tree Hall, Forest Gate (Essex), und aus hohem englischen Adelsbesitz* (Munich and Paris, 1912).
- Kunz Sale II (1885) *Secondo Catalogo de oggetti di Numismatica vendibili presso Carlo Kunz. Monete Bizantine, monete de principi occidentali in Oriente ec.* (Venezia, 1885).
- Luschin von Ebengreuth Dr. Arnold Luschin von Ebengreuth, "Der Denar der Lex Salica," *Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften in Wien*, Phil.-hist. Klasse, CLXIII (1910), Abh. 4.
- Mionnet T. E. Mionnet, *De la rareté et du prix des médailles romaines ou recueil contenant les types rares et inédites des médailles d'or, d'argent et de bronze frappées pendant la durée de la république et de l'empire romaine* (2nd ed.: Paris, 1827), II.
- Monnaies et Médailles Sale XI, 23/24 Jan. 1953 *Monnaies et Médailles, S. A., Bâle, Vente Publique XI*, 23/24 Jan. 1953.
- Monnaies et Médailles Sale XIII, 17-19 June 1954 *Monnaies et Médailles, S. A., Bâle, Vente aux Enchères XIII*, 17-19 June 1954.
- Monneret De Villard Ugo Monneret De Villard, "Sui Diversi valori del Soldo Bizantino," *Rivista Italiana di Numismatica*, XXXVI (1923), pp. 33-40.
- Münsterberg R. Münsterberg, "Spätrömische Inedita," *Mitteilungen der Numismatischen Gesellschaft in Wien*, XV (1923), pp. 227-229.

- Naville Sale III, 16 June 1922 *Monnaies d'or romaines et byzantines, collection de Sir Arthur J. Evans* (Genève: Agence des Journaux, 1922).
- Ratto Sale, 9 Dec. 1930 R. Ratto, *Monnaies byzantines et d'autres pays contemporaines à l'époque byzantine* (Lugano, 1930).
- Ratto Sale, 1–2 Dec. 1932 *Collection E. H. Schwing, D. C., F. A. C., Séries important d'aes graves, Monnaies consulaires, Monnaies romaines.*
- Ratto Sale, 26–29 Jan. 1955 *Collezione del Prof. Dott. Giorgio Giorgi. Monete Romane. Aes Grave – Repubblica – Impero. Monete Bizantina D'Oro. In Vendita All'Asta Pubblica I Giorni 26 – 27 – 28 – 29 Gennaio 1955* (Milan: Mario Ratto, 1955).
- Rollin et Feuardent Sale, 24–30 April 1887 *Collection de M. le Vicomte de Ponton d'Amécourt, Monnaies d'or romaines et byzantines* (Paris: Rollin et Feuardent, 1887).
- Sabatier J. Sabatier, *Description générale des monnaies byzantines frappées sous les empereurs d'orient depuis Arcadius jusqu'à la prise de Constantinople par Mahomet II* (Paris and London, 1862), 2 vols.
- Stack's Sale, 20–22 Jan. 1938 *Auction Sale Catalogue of the Rheinhold Faeltten Collection of Ancient Coins to be Sold January 20, 21, 22, 1938* (New York, 1938).
- Stack's Sale, 28 June 1948 *The Charles Raphael Collection of South American and Foreign Silver and Gold Coins to be Sold at Public Auction Sale Saturday, June 28, 1952.*
- Stefan Friedrich Stefan, "Der Münzfund von Maglern-Thörl (vergraben um 570/71 bis 584/85) und die Frage der reduzierten Solidi," *Numismatische Zeitschrift*, LXX (1937), pp. 43–63.
- Tolstoi Comte Jean Tolstoi, *Monnaies byzantines* (St. Petersburg, 1913–14), 8 fasc.
- Werner Joachim Werner, *Münzdatierte austrasische Grabfunde* (Berlin and Leipzig, 1935), in ed. Hans Zeiss, *Germanische Denkmäler der Völkerwanderungszeit*, III, issued by the Römisch-Germanische Kommission des Archäologischen Instituts des Deutschen Reiches.

Justinian

1. *Obv.* DNIVSTINI ANVSPPAVI
Bust of Justinian, helmeted (with plume) and cuirassed, facing front. An orb surmounted by a cross in the right hand; a shield bearing the horseman device in the left hand.
Rev. VICTORI AAVCCCΘ
Victory standing facing front wearing chiton and peplos. A globe in the left hand; a long cross in the right hand. A star in the field below the left hand.
In the exergue OB*+*
Weight: 4.11 grammes ↑↓ Hermitage¹
2. *Obv.* DNIVSTINI ANVSPPAVI
Similar to the preceding coin.
Rev. VICTORI AAVCCCI
Similar to the preceding coin.
In the exergue OBXX
Weight: 3.690 grammes Stefan 13²
3. *Obv.* DNIVSTINI ANVSPPAVI
Similar to the preceding coin.
Rev. VICTORI AAVCCCI
Similar to the preceding coin.
In the exergue OBXX
Weight: 3.68 grammes ↑↘ Hermitage³
4. *Obv.* DNIVSTINI ANVSPPAVI
Similar to the preceding coin.
Rev. VICTORI AAVCCCI
Similar to the preceding coin.
In the exergue OBXX
Weight: 3.79 grammes ↑↓ Hermitage⁴
5. *Obv.* DNIVSTINI ANVSPPAVC
Similar to the preceding coin.
Rev. VICTORI AAVCCCI
Similar to the preceding coin.
In the exergue OBXX
Weight: 3.72 grammes ↑↓ Ratto Sale, 26–29 Jan. 1955, 1208⁵
6. *Obv.* DNIVSTINI ANVSPPAVC
Similar to the preceding coin.
Rev. VICTORI AAVCCCI
Similar to the preceding coin.
In the exergue OBXX
Weight: 3.70 grammes ↑↙ Coll. Leuthold⁶

7. *Obv.* **DNIVSTINI ANVSPPAVI**
Similar to the preceding coin.
Rev. **VIC[TORI] AAVCCCI**
Similar to the preceding coin.
In the exergue **OBXX**
Weight: 3.66 grammes ↑↓ Coll. Leuthold⁷
8. *Obv.* **DNIVSTINI ANVSPPAVC**
Similar to the preceding coin.
Rev. **VICTORI AAVCCCI**
Similar to the preceding coin.
In the exergue **OBXX**
Weight: 3.7184 grammes Coll. Grierson⁸
9. *Obv.* **DNIVSTINI ANVSPPAVI**
Similar to the preceding coin.
Rev. **VICTORI AAVCCCI**
Similar to the preceding coin.
In the exergue **OBXX**
Weight: 3.72 grammes Cahn (1951)⁹
10. *Obv.* **DNIVSTINI ANVSPPAVI**
Similar to the preceding coin.
Rev. **VICTORI AAVCCCI**
Similar to the preceding coin.
In the exergue **OBXX**
Weight: 3.74 grammes ↑↓ Hermitage
11. *Obv.* **DNIVSTINI ANVSPPAVI**
Similar to the preceding coin.
Rev. **VICTORI AAVCCCI**
Similar to the preceding coin.
In the exergue **OBXX**
Weight: 3.71 grammes ↑↙ Hermitage¹⁰
12. *Obv.* **DNIVSTINI ANVSPPAVI**
Bust of Justinian, helmeted (with plume) and cuirassed, facing front. An orb surmounted by a cross in the right hand; shield bearing the horseman device in the left hand.
Rev. **VICTORI AAVCCCI**
Victory standing facing front wearing chiton and peplos. A globe in the left hand; a long cross potent in the right hand. A star in the field below the left hand.
In the exergue **OBXX**
Weight: 3.74 grammes ↑↓ Hermitage

13. *Obv.* DNIVSTINI ANVSPPAVC
Similar to the preceding coin.
Rev. VICTORI AAVCCCI
Similar to the preceding coin.
In the exergue OBXX
Weight: 2.20 grammes Bibliothèque Nationale¹¹
14. *Obv.* DNIVSTINI ANVSPPAVC
Similar to the preceding coin.
Rev. VICTORI AAVCCCI
Similar to the preceding coin.
In the exergue OBXX
Weight: 3.72 grammes ↑↓ Hermitage
15. *Obv.* DNIVSTINI ANVSPPAVI
Similar to the preceding coin.
Rev. VICTORI AAVCCCI
Similar to the preceding coin.
In the exergue OBXX
Weight: 3.70 grammes ↑↙ Hermitage
16. *Obv.* DNIVSTINI ANVSPPAVI
Similar to the preceding coin.
Rev. VICTORI [AAVC]CCI
Similar to the preceding coin.
In the exergue OBXX
Weight: 3.71 grammes ↑↓ Hermitage
17. *Obv.* DNIVSTINI ANVSPPAVI
Similar to the preceding coin.
Rev. VICTORI AAVCCCI
Similar to the preceding coin.
In the exergue OBXX
Weight: 3.71 grammes ↑↙ Hermitage¹²
18. *Obv.* DNIVSTINI VNVSPPAVI
Similar to the preceding coin.
Rev. VICTORI AAVCCCI
Similar to the preceding coin.
In the exergue OBXX
Weight: 3.72 grammes Ratto Sale, 9 Dec. 1930, 450¹³
19. *Obv.* Inscription probably similar to the preceding coin.
Similar to the preceding coin but not fully described or illustrated.
Rev. Inscription probably similar to the preceding coin.
Similar to the preceding coin but not fully described or illustrated.
In the exergue OBXX
Weight: not given Brüder Egger Sale XL, 28 Nov. 1904, 2910

20. *Obv.* **DNIVSTINI ANVSPPAVI**
Bust of Justinian, helmeted (with plume) and cuirassed, facing front. An orb surmounted by a cross in the right hand; shield bearing the horseman device in the left hand.
- Rev.* **VICTORI AAVCCCI**
Victory standing facing front wearing chiton and peplos. A globe in the left hand; a long cross ending in the letter **P** (the Christogram) in the right hand. A star in the field below the left hand.
In the exergue **OBXX**
- Weight: 3.73 grammes British Museum¹⁴
21. *Obv.* **ΘNIVSTINI ANVSPPAVI**
Similar to the preceding coin.
- Rev.* **VICTORI AAVCCCI**
Similar to the preceding coin.
In the exergue **OBXX**
- Weight: 3.71 grammes Monnaies et Médailles Sale XI,
23/24 Jan. 1953, 221¹⁵
22. *Obv.* **DNIVSTINI ANVSPPAVI**
Similar to the preceding coin.
- Rev.* **VICTORI AAVCCCI**
Similar to the preceding coin.
In the exergue **ODXX**
- Weight: 3.5843 Coll. Grierson¹⁶
23. *Obv.* **D[NIVS]TINI ANVSPPAVC**
Similar to the preceding coin.
- Rev.* **VICTORI AAVCCCI**
Similar to the preceding coin.
In the exergue **OBXX**
- Weight: 3.75 grammes Cahn (1951)¹⁷
24. *Obv.* Inscription not given but probably similar to the preceding coin.
Similar to the preceding coin.
- Rev.* Inscription not given but probably similar to the preceding coin.
Similar to the preceding coin.
In the exergue **OBXX**
- Weight: 3.64 grammes Hirsch Sale XXIV, 10 May 1909, 3016
25. *Obv.* Inscription not given but probably similar to the preceding coin.
Similar to the preceding coin.
- Rev.* Inscription not given but probably similar to the preceding coin.
Similar to the preceding coin.
In the exergue **OBXX**
- Weight: 3.68 grammes Hirsch Sale XXXI, 6 May 1912, 2099

26. *Obv.* Inscription not given but probably similar to the preceding coin.
Description not given but probably similar to the preceding coin.
Rev. Inscription not given but probably similar to the preceding coin.
Description not given but probably similar to the preceding coin.
In the exergue **OBXX**
Weight: 3.68 grammes Luschin von Ebengreuth, p. 36¹⁸
27. *Obv.* Inscription not given but probably similar to the preceding coin.
Similar to the preceding coin.
Rev. Inscription not given but probably similar to the preceding coin.
Similar to the preceding coin.
In the exergue **OBXX**
Weight: not given L. & L. Hamburger Sale, 24 Oct. 1898, 91
28. *Obv.* **DNIVSTINI ANVSPPAVC**
Bust of Justinian, helmeted (with plume) and cuirassed, facing front. An orb surmounted by a cross in the right hand; shield bearing the horseman device in the left hand.
Rev. **VICTORI AAVCCCI**
Victory standing facing front wearing chiton and peplos. A globe in the left hand; a long cross in the right hand. A star in the field below the left hand.
In the exergue **OB†***
Weight: 3.35 grammes $\uparrow\downarrow$ Coll. Kapamadjji
29. *Obv.* **DNIVSTINI ANVSPPAVC**
Similar to the preceding coin.
Rev. **VICTORI AAVCCCI**
Similar to the preceding coin.
In the exergue **CO†***
Weight: 3.73 grammes $\uparrow\downarrow$ Hermitage¹⁹
30. *Obv.* **DNIVSTINI ANVSPPAVC**
Similar to the preceding coin.
Rev. **VICTORI AAVCCCI**
Similar to the preceding coin.
In the exergue **OB†***
Weight: 3.69 grammes Dumbarton Oaks²⁰

Barbarian Imitations of Justinian

31. *Obv.* **DNIVSTINI ANVSPPAVC**
Bust of Justinian, helmeted (with plume) and cuirassed, facing front. An orb surmounted by a cross in the right hand; a shield bearing the horseman device in the left hand.

Rev. VICTORI AAVCCI

Victory standing facing front wearing chiton and peplos. A globe surmounted by a cross in the left hand; a long cross ending in the letter P (the Christogram) in the right hand. A star in the field below the left hand.

In the exergue OBX+X

Weight: not given

Belfort 5238²¹

32. *Obv.* DNIVSTINI ANVSPPCCS

Similar to the preceding coin.

Rev. VICTORI AAVCCCI

Similar to the preceding coin.

In the exergue OBX+X

Weight: 3.98 grammes

Bibliothèque Nationale²²

33. *Obv.* NVSTINI/ TVΓPPI

Similar to the preceding coin but of much cruder workmanship and style.

Rev. VICTOV AVTCT.

Similar to the preceding coin but of much cruder workmanship and style.

In the exergue OBXT

Weight: 3.95 grammes

Stefan 14²³

Justin II

34. *Obv.* DNI VSTI NVSPPAVI

Bust of Justin, helmeted (with plume) and cuirassed, facing front. In his right hand an orb surmounted by a small Victory standing facing the Emperor and holding a crown in its extended hand. The horseman device shield in the left hand of the Emperor.

Rev. VICTORI AAVCCCI

Constantinople seated, head right, holding a staff in the right hand and a globe in the left hand.

In the exergue OBXX

Weight: 3.7 grammes

Tolstoi 16²⁴

35. *Obv.* DNI VSTI NVSPPAVI

Similar to the preceding coin.

Rev. VICTORI AAVCCCI

Similar to the preceding coin.

In the exergue OBXX

Weight: 3.72 grammes ↑↘

Budapest²⁵

10*

36. *Obv.* **DNI VSTI NVSPPAVI**
Similar to the preceding coin.
Rev. **VICTORI AAVCCCI**
Similar to the preceding coin.
In the exergue **OBXX**
Weight: 3.65 grammes ↑↓ Hermitage
37. *Obv.* **DNI VSTI NVSPPAVI**
Similar to the preceding coin.
Rev. **VICTORI AAVCCCI**
Similar to the preceding coin.
In the exergue **OBXX**
Weight: 3.55 grammes ↑↓ Hermitage²⁶
38. *Obv.* **DNI VSTI NVSPPAVI**
Similar to the preceding coin.
Rev. **VICTORI AAVCCCI**
Similar to the preceding coin.
In the exergue **OBXX**
Weight: 3.58 grammes ↑↓ Hermitage²⁷
39. *Obv.* **DNI VSTI NVSPPAVI**
Similar to the preceding coin.
Rev. **VICTORI AAVCCCI**
Similar to the preceding coin.
In the exergue **OB·XX·**
Weight: 3.68 grammes Hirsch Sale XXXI, 6 May 1912, 2121
40. *Obv.* **DNI VSTI NVSPPAVI**
Similar to the preceding coin.
Rev. **VICTORI AAVCCCI**
Similar to the preceding coin.
In the exergue **OB·XX·**
Weight: 3.70 grammes Hirsch Sale XXIV, 10 May 1909, 3076
41. *Obv.* **DNI VSTI NVSPPAVC**
Similar to the preceding coin.
Rev. **VICTORI AAVCCCI**
Similar to the preceding coin.
In the exergue **OB·XX·**
Weight: not given Rollin et Feuarent Sale,
24-30 April 1887, 879
42. *Obv.* Inscription not given but probably similar to the preceding coin.
Description not given but probably similar to the preceding coin.

Rev. Inscription not given but probably similar to the preceding coin.
Description not given but probably similar to the preceding coin.
In the exergue **OBXX**

Weight: 3.47 grammes

Luschin von Ebengreuth, p. 36²⁸

Mint of Antioch

43. *Obv.* **DNI VSTI NVSPPAVI**

Bust of Justin, helmeted (with plume) and cuirassed, facing front.
In his right hand an orb surmounted by a small Victory standing facing the Emperor and holding a crown in its extended hand.
The horseman device shield in the left hand of the Emperor.

Rev. **VICTORI AAVCCCI**

Constantinople seated, head right, holding a staff in the right hand and a globe in the left hand. A small cross potent in the left field.
In the exergue **OBXX**:

Weight: not given ↑↓

In trade²⁹

44. *Obv.* **DNI VSTI NVSPPAVI**

Bust of Justin, helmeted (with plume) and cuirassed, facing front.
In his right hand an orb surmounted by a small Victory standing facing the Emperor and holding a crown in its extended hand. The horseman device shield in the left hand of the Emperor.

Rev. **VICTORI AAVCCCI**

Constantinople seated, head right, holding a staff in the right hand and a globe in the left hand.

In the exergue **OBXX**

Weight: 3.51 grammes ↑↘

Budapest³⁰

45. *Obv.* **DNI VSTI NVSPPAVI**

Similar to the preceding coin.

Rev. **VICTORI AAVCCCI**

Similar to the preceding coin.

In the exergue **OBXX**

Weight: 3.62 grammes ↑↓

Hermitage

46. *Obv.* **DNI VSTI NVSPPAVI**

Similar to the preceding coin.

Rev. **VICTORI AAVCCCI**

Similar to the preceding coin.

In the exergue **OBXX**

Weight: 3.73 grammes

Vienna³¹

47. *Obv.* **DNI VSTI NVSPPAVI**

Similar to the preceding coin.

Rev. **VICTORI AAVCCCI:**

Similar to the preceding coin.

In the exergue **OBXX**

Weight: not given ↑↓

In trade

48. *Obv.* **DNI VSTI NVSPPAVC**

Similar to the preceding coin.

Rev. **VICTORI AAVCCCI:**

Similar to the preceding coin.

In the exergue **OBXX**

Weight: not given

Brüder Egger Sale XL, 28 Nov. 1904, 2918

49. *Obv.* **DNI VSTI NVSPPAVI**

Similar to the preceding coin.

Rev. **VICTORI AAVCCC:**

Similar to the preceding coin.

In the exergue **OBXX**

Weight: not given ↑↙

In trade

50. *Obv.* **DNI VSTI NVSPPAVC**

Bust of Justin, helmeted (with plume) and cuirassed, facing front.

In his right hand an orb surmounted by a small Victory standing

facing the Emperor and holding a crown in its extended hand.

The horseman device shield in the left hand of the Emperor.

Rev. **VICTORI AAVCCCΘS**

Constantinople seated, head right, holding a staff in the right hand

and a globe in the left hand.

In the exergue **OB*+***

Weight: 4.21 grammes

British Museum

51. *Obv.* **DNI VSTI NVSPPAVI**

Similar to the preceding coin.

Rev. **VICTORI AAVCCCΘS**

Similar to the preceding coin.

In the exergue **OB*+***

Weight: 4.095 grammes

Stefan 17³²

52. *Obv.* **DNI VSTI NVSPPAVI**

Similar to the preceding coin.

Rev. **VICTORI AAVCCCΘS**

Similar to the preceding coin.

In the exergue **OB*+***

Weight: 4.140 grammes

Stefan 16³³

53. *Obv.* **DNI VSTI NVSPPAVI**

Similar to the preceding coin.

Rev. **VICTORI AAVCCCΘS**
 Similar to the preceding coin.
 In the exergue **OB*+***
 Weight: 3.54 grammes ↑↙

Coll. Leuthold³⁴

54. *Obv.* **DNI VSTI NVSPPAVI**
 Similar to the preceding coin.
Rev. **VICTORI AAVCCCΘS**
 Similar to the preceding coin.
 In the exergue **OB*+***
 Weight: 4.11 grammes ↑↓

Coll. Leuthold

55. *Obv.* **DNI VSTI NVSPPAVI**
 Similar to the preceding coin.
Rev. **VICTORI AAVCCCΘS**
 Similar to the preceding coin.
 In the exergue **OB*+***
 Weight: 4.08 grammes

Ratto Sale, 9 Dec. 1930, 760³⁵

56. *Obv.* **DNI VSTI NVSPPAVI**
 Similar to the preceding coin.
Rev. **VICTORI AAVCCCΘS**
 Similar to the preceding coin.
 In the exergue **OB*+***
 Weight: 3.63 grammes ↑↓

Hermitage³⁶

57. *Obv.* **DNI VSTI NVSPPAVI**
 Similar to the preceding coin.
Rev. **VICT[ORI] AAVCCCΘS**
 Similar to the preceding coin.
 In the exergue **OB*+***
 Weight: 4.12 grammes

Vienna

58. *Obv.* **ONI VSTI NVSPPAVI**
 Similar to the preceding coin.
Rev. **VICTORI AAVCCCΘS**
 Similar to the preceding coin.
 In the exergue **OB*+***
 Weight: not given ↑↓

In trade³⁷

59. *Obv.* **DNI VSTI NVSPPAVI**
 Similar to the preceding coin.
Rev. **VICTORI AAVCCCΘS**
 Similar to the preceding coin.
 In the exergue **OB*+***
 Weight: not given ↑↘

In trade³⁸

60. *Obv.* DNI VSTI NVSPPAV[I]
Similar to the preceding coin.
Rev. VICTORI [AA]VCCCΘS
Similar to the preceding coin.
In the exergue OB*+*
Weight: not given ↑↓ In trade
61. *Obv.* ONI VSTI NVSPPAVI
Similar to the preceding coin.
Rev. VICTORI AAVCCCΘS
Similar to the preceding coin.
In the exergue OB*+*
Weight: not given ↑↙ In trade
62. *Obv.* ONI VSTI NVSPPAVI
Similar to the preceding coin.
Rev. VICTORI AAVCCCΘS
Similar to the preceding coin.
In the exergue OB*+*
Weight: not given ↑↓ In trade
63. *Obv.* DNI VSTI NVSPPAVI
Similar to the preceding coin.
Rev. VICTORI AAVCCCΘS
Similar to the preceding coin.
In the exergue OB*+*
Weight: not given ↑↙ In trade
64. *Obv.* DNI VSTI NVSPPAV I
Similar to the preceding coin.
Rev. VICTORI AAVCCCΘS
Similar to the preceding coin.
In the exergue OB*+*
Weight: not given ↑← In trade
65. *Obv.* ONI VS[TI] NVSPPAVI
Similar to the preceding coin.
Rev. VI[CTO]RI AAVCCCΘS
Similar to the preceding coin.
In the exergue OB*+*
Weight: not given ↑↓ In trade
66. *Obv.* DNI VSTI NVSPPAVC
Similar to the preceding coin.
Rev. VICTORI AAVCCCΘS
Similar to the preceding coin.
In the exergue OB*+*
Weight: not given Hess Sale 194, 25 March 1929, 1016

67. *Obv.* Inscription not given but probably similar to the preceding coin.
Description not given but probably similar to the preceding coin.
Rev. **VICTORI AAVCCCΘS**
Description not given but probably similar to the preceding coin.
In the exergue **OB*+***
Weight: not given Brüder Egger Sale, 21 Nov. 1898, 933
68. *Obv.* **DNI VSTI NVSPPAVC**
Similar to the preceding coin.
Rev. **VICTORI AAVCCCΘS**
Similar to the preceding coin.
In the exergue **OB*+***
Weight: 3.90 grammes Hirsch Sale XXXI, 6 May 1912, 2120
69. *Obv.* Inscription not given but probably similar to the preceding coin.
Description not given but probably similar to the preceding coin.
Rev. **VICTOR[Ι] AAVCCCΘS**
Description not given but probably similar to the preceding coin.
In the exergue **OB*+***
Weight: not given Hess Sale, 24 May 1886, 655
70. *Obv.* **ONI VSTI NVSPPAVI**
Similar to the preceding coin.
Rev. **VICTORI AAVCCCΘS**
Similar to the preceding coin.
In the exergue **OB*+***
Weight: not given Coin Galleries Sale, 17 Aug. 1956, 900
71. *Obv.* **DNI VSTI NVSPPAVC**
Bust of Justin, helmeted (with plume) and cuirassed, facing front.
In his right hand an orb surmounted by a small Victory standing facing the Emperor and holding a crown in its extended hand. The horseman device shield in the left hand of the Emperor.
Rev. **VICTORI AAVCCCΘS**
Constantinople seated, head right, holding a staff in the right hand and a globe in the left hand. In the field to the left the letter Ι.
In the exergue **OB*+***
Weight: not given Sabatier 2

Barbarian Imitations of Justin II

72. *Obv.* **DNI VSTI NVSPPAVC**
Bust of Justin, helmeted (with plume) and cuirassed, facing front.
In his right hand an orb surmounted by a small Victory standing facing the Emperor and holding a crown in its extended hand. The horseman device shield in the left hand of the Emperor.

Rev. **VICTORI AAVC<<P**

Constantinople seated, head right, holding a staff in the right hand and a globe surmounted by a cross in the left hand.

In the exergue **CXNXU**

Weight: 3.99 grammes

Hermitage³⁹

73. *Obv.* **DNI VSTI NVSPPAVC**

Similar to the preceding coin.

Rev. **VICTORI AAVCCCS**

Similar to the preceding coin.

In the exergue **COX+X•**

Weight: 4.070 grammes

Stefan 5⁴⁰

74. *Obv.* **DNI VSII NVSPPAVC**

Similar to the preceding coin.

Rev. **VICTORI AAVCCCS**

Similar to the preceding coin.

In the exergue **CONX+X:**

Weight: 3.992 grammes

Stefan 15⁴⁰

75. *Obv.* **VSTI INVSPPAV**

Similar to the preceding coin.

Rev. **VICONAI AAVCCCI**

Similar to the preceding coin.

In the exergue **CONX+**

Weight: 3.885 grammes

Werner 61⁴²

76. *Obv.* **DNI VSTI NVSPPAVC**

Similar to the preceding coin.

Rev. **VICTORI AAVCCCS**

Similar to the preceding coin.

In the exergue **CONX+X''**

Weight: not given

Basel Münzhandlung, Fixed Price List XIII
(Nov. 1938), 123⁴³

77. *Obv.* **DNI VSTI NVSPPAVC**

Similar to the preceding coin.

Rev. **VICTORI AAVCCSZ:**

Similar to the preceding coin.

In the exergue **CONX+x**

Weight: not given

Cahn Sale 75, 30 May 1932, 1580

78. *Obv.* Inscription not given but probably similar to the preceding coin.

Description not given but probably similar to the preceding coin.

Rev. Inscription not given but probably similar to the preceding coin.

Description not given but probably similar to the preceding coin.

In the exergue **CX+X÷**

Weight: 4.05 grammes

Castello Sforzesco⁴⁴

Justin II and Tiberius II Constantine

79. *Obv.* DNIVSTINIETCONSTAN
 Busts of Justin and Tiberius Constantine wearing crowns and *paludamenta* facing front. A small cross above the heads.
 In the exergue PPAVC
Rev. VICTORI AAVCCΘS
 Victory standing facing front wearing chiton and peplos. A globe surmounted by a small cross in the left hand; a long cross ending in the letter P (the Christogram) in the right hand.
 In the exergue OB+*
 Weight: 3.95 grammes British Museum⁴⁵

*Tiberius II Constantine**Mint of Antioch*

80. *Obv.* ΘMTIBCONS TANTPPAVI
 Bust of Tiberius Constantine facing front wearing a cuirass and a crown surmounted by a cross. An orb surmounted by a cross in the right hand; shield bearing the horseman device in the left hand.
Rev. VICTORI AAVCCΘS
 Cross potent on four steps.
 In the exergue OB+*
 Weight: 4.00 grammes ↑↓ Coll. Kapamadjı
81. *Obv.* ΘMTIBCONS TANTPPAVI
 Similar to the preceding coin.
Rev. VICTORI AAVCCΘS
 Similar to the preceding coin.
 In the exergue OB+*
 Weight: 4.08 grammes British Museum⁴⁶
82. *Obv.* DMTIBCONS TANTPPAVI
 Similar to the preceding coin.
Rev. VICTORI AAVCCΘS
 Similar to the preceding coin.
 In the exergue OB+*
 Weight: 4.02 grammes ↑↓ Hermitage⁴⁷
83. *Obv.* DMTIBCONS TANTPPAVC
 Similar to the preceding coin.
Rev. VICTORI AAVCCΘS
 Similar to the preceding coin.
 In the exergue OB+*
 Weight: 4.09 grammes ↑↓ Hermitage⁴⁸

84. *Obv.* DM̄TIBCONS TANTPPAVI

Similar to the preceding coin.

Rev. VICTORI AAVCCΘS

Similar to the preceding coin.

In the exergue OB+*

Weight: not given

Hess Sale, 24 May 1886, 68r⁴⁹85. *Obv.* DM̄TIBCONS TANTPPAVI

Similar to the preceding coin.

Rev. VICTORI AA'CCΘSS

Similar to the preceding coin.

In the exergue OB+*

Weight: 4.02 grammes ↑↓

Hermitage⁵⁰86. *Obv.* dMTIBCONS TANTPPAVI

Similar to the preceding coin.

Rev. VICTORI AAVCCΘS

Similar to the preceding coin.

In the exergue OB+*

Weight: 4.09 grammes

Vienna⁵¹87. *Obv.* dMTIBCONS TANTPPAVI

Similar to the preceding coin.

Rev. VICTORI AAVCCΘS

Similar to the preceding coin.

In the exergue OB+*

Weight: 4.05 grammes ↑↙

Coll. Leuthold

*Maurice Tiberius*88. *Obv.* DNMAVRC TIBPPAVC

Bust of Maurice Tiberius facing front, helmeted (with circular ornament in front and plume) and wearing a cuirass with *paludamentum* clasped by *fibula* on the right shoulder. An orb surmounted by a cross in the right hand.

Rev. VICTORI AAVCCI

Victory standing facing front wearing chiton and peplos. A globe in the left hand; a long cross ending in the letter P (the Christogram) in the right hand.

In the exergue OBXX

Weight: 3.68 grammes ↑↙

Budapest⁵²89. *Obv.* DNMAVRC TIBPPAVI

Similar to the preceding coin.

Rev. VICT[ORI] AAVCCI

Similar to the preceding coin.

In the exergue OBXX

Weight: 3.68 grammes ↑↘

Budapest⁵³

90. *Obv.* DNMAVRC TIBPPAVC

Bust of Maurice Tiberius facing front, helmeted (with plume) and wearing a cuirass with *paludamentum* clasped by a *fibula* on the right shoulder. An orb surmounted by a cross in the right hand.

Rev. VICTORI AAVCCP

Victory standing facing front wearing chiton and peplos. A globe surmounted by a cross in the left hand; a long cross ending in the letter P (the Christogram) in the right hand.

In the exergue OB+*

Weight: 4.05 grammes ↑↓

Coll. Leuthold⁵⁴

91. *Obv.* DNMAVRC TIBPPAVI

Bust of Maurice Tiberius facing front, helmeted (with circular ornament in front and plume) and wearing a cuirass with *paludamentum* clasped by *fibula* on the right shoulder. An orb surmounted by a cross in the right hand.

Rev. VICTORI AAVCCB

Victory standing facing front wearing chiton and peplos. A globe in the left hand; a long cross ending in the letter P (the Christogram) in the right hand.

In the exergue OB+*

Weight: not given

Hess Sale, 24 May 1886, 704

92. *Obv.* DNMAVR' TIBPPAVI

Similar to the preceding coin.

Rev. VICTORI AAVCCB

Similar to the preceding coin.

In the exergue OB+*

Weight: 7.30 grammes ↑↓

Bibliothèque Nationale⁵⁵

93. *Obv.* DNMAVR' TIBPPAVI

Similar to the preceding coin.

Rev. VICTORI AAVCCĒ

Similar to the preceding coin.

In the exergue OB+*

Weight: 4.0617 grammes

Coll. Grierson⁵⁶

Mint of Antioch

94. *Obv.* DNMAVRC TIBPPAVI

Bust of Maurice Tiberius facing front, helmeted (with circular ornament in front and plume) and wearing a cuirass with

paludamentum clasped by *fibula* on the right shoulder. An orb surmounted by a cross in the right hand.

Rev. VICTORI AAVCCΘS

Victory standing facing front wearing chiton and peplos. A globe in the left hand; a long cross ending in the letter P (the Christogram) in the right hand.

In the exergue OB+*

Weight: not given

Ratto Sale, 1-2 Dec. 1932, 741

95. *Obv.* CNMAVRC TIBPPAVI

Similar to the preceding coin.

Rev. VICTORI AAVCCΘS

Similar to the preceding coin.

In the exergue OB+*

Weight: 4.04 grammes

Coll. Leuthold

96. *Obv.* DNMAVRC TIBPPAVI

Similar to the preceding coin.

Rev. VICTORI AAVCCΘS

Similar to the preceding coin.

In the exergue OB+*

Weight: 3.98 grammes

Hermitage⁵⁷

97. *Obv.* ENMAVRC TIBPPAVI

Similar to the preceding coin.

Rev. VICTORI AAVCCΘS

Similar to the preceding coin.

In the exergue OB+*

Weight: 4.065 grammes

Vienna

98. *Obv.* Inscription not given but probably similar to the preceding coin.

Similar to the preceding coin.

Rev. VICTORI AAVCCΘS

Similar to the preceding coin.

In the exergue OB+*

Weight: not given

Kunz Sale II (1855), 142⁵⁸

99. *Obv.* ONMAVRIC TIBPPAVI

Bust of Maurice Tiberius facing front wearing a cuirass and a helmet surmounted by a cross. An orb surmounted by a cross in the right hand; shield bearing the horseman device in the left hand.

Rev. VICTORI AAVCCΘS

Victory standing facing front wearing chiton and peplos. A globe in the left hand; a long cross ending in the letter P (the Christogram) in the right hand.

In the exergue OB+*

Weight: 4.06 grammes

British Museum⁵⁹

Phocas

100. *Obv.* **ONFOCAS PERPAVC**
 Bust of Phocas with pointed beard facing front wearing a crown with a circular ornament in front and surmounted by a cross. The Emperor wears a cuirass and a *paludamentum* clasped by a *fibula* on the right shoulder. An orb surmounted by a cross in the right hand.
Rev. **VICTORI AAVCCA**
 Victory standing facing front wearing chiton and peplos. A globe in the left hand; a long cross in the right hand.
 In the exergue **OBXX**
 Weight: 3.67 grammes ↑ ↙ Budapest⁶⁰
101. *Obv.* **ONFOCAS PERPAVC**
 Similar to the preceding coin.
Rev. **VICTORI[A] AVS4E**
 Similar to the preceding coin.
 In the exergue **OBXX**
 Weight: 3.74 grammes ↑ ↙ Hermitage⁶¹
102. *Obv.* **DNFOCAS PERPAVC**
 Similar to the preceding coin.
Rev. **VICTORIA AVS4E**
 Similar to the preceding coin.
 In the exergue **OBXX**
 Weight: 3.60 grammes ↑ ↓ Hermitage⁶²
103. *Obv.* **DNFOCAS PERPAVC**
 Similar to the preceding coin.
Rev. **VICTORI AAVCC)**
 Similar to the preceding coin.
 In the exergue **OBXX**
 Weight: not given Hess Sale, 30 April 1917, 4754⁶³
104. *Obv.* **. . FOCAS PERPAVC**
 Bust of Phocas with pointed beard facing front wearing a crown with a circular ornament in front and surmounted by a cross. The Emperor wears a cuirass and a *paludamentum* clasped by a *fibula* on the right shoulder. An orb surmounted by a cross in the right hand.
Rev. **VICTORI AAVCC E**
 Victory standing facing front wearing chiton and peplos. A globe in the left hand; a long cross ending in the letter **P** (the Christogram) in the right hand.
 In the exergue **OB+***
 Weight: not given Turin, Academy of Sciences⁶⁴

105. *Obv.* ΘNFOCAS PERPAVI
Similar to the preceding coin.
Rev. VICTORIA AVΣ4E
Similar to the preceding coin.
In the exergue OB+*
Weight: 4.07 grammes Vienna⁶⁵
106. *Obv.* ΘNFOCAS PERPAVC
Similar to the preceding coin.
Rev. VICTORIA AVΣ4E
Similar to the preceding coin.
In the exergue OBXX
Weight: 3.70 grammes Coll. Knobloch⁶⁶
107. *Obv.* ΘNFOCAS PERPAVC
Similar to the preceding coin.
Rev. VICTORIA AVΣ4E
Similar to the preceding coin.
In the exergue OBXX
Weight: 3.63 grammes ↑↓ Budapest⁶⁷
108. *Obv.* ΘNFOCAS PERPAVC
Similar to the preceding coin.
Rev. VICTORI AAVCCS
Similar to the preceding coin.
In the exergue OBXX
Weight: 3.73 grammes ↑↓ Hermitage⁶⁸
109. *Obv.* ΘNFOCAS PERPAVC
Similar to the preceding coin.
Rev. VICTORI AAVCCS
Similar to the preceding coin.
In the exergue OBXX
Weight: 3.62 grammes ↑↙ Budapest⁶⁹
110. *Obv.* ΘNFOCAS PERPAVC
Similar to the preceding coin.
Rev. VICTORI AAVCCS
Similar to the preceding coin.
In the exergue OBXX
Weight: 3.67 grammes ↑↙ Budapest⁷⁰
111. *Obv.* οNFOCAS PERPAVC
Similar to the preceding coin.
Rev. VICTORI AAVCC4
Similar to the preceding coin.
In the exergue OB+*
Weight: 4.05 grammes Vienna⁷¹

112. *Obv.* ♂NFOCAS PERPAVC
Similar to the preceding coin.
Rev. VICTORIA AVÇHI
Similar to the preceding coin.
In the exergue OB+*
Weight: 4.07 grammes British Museum⁷²
113. *Obv.* ♂NFOCAS PERPAVC
Similar to the preceding coin.
Rev. VICTORIA A. .I
Similar to the preceding coin.
In the exergue OB+*
Weight: not given Goodacre, p. 90
114. *Obv.* Inscription not given but probably similar to the preceding coin.
Similar to the preceding coin.
Rev. VICTORI AAVCCI
Similar to the preceding coin.
In the exergue OB+*
Weight: 4.07 grammes Münsterberg, p. 228⁷³
115. *Obv.* ♂NFOCAS PERPAVC
Similar to the preceding coin.
Rev. VICTORI AAVCCI
Similar to the preceding coin.
In the exergue OB+*
Weight: 4.00 grammes Ratto Sale, 9 Dec. 1930, 1199

Heraclius

116. *Obv.* dNHERACLI 4SPPAVC
Bust of Heraclius with short beard facing front wearing a crown with a circular ornament in front and surmounted by a cross which is within a plume. The Emperor wears a cuirass and a *paludamentum* clasped by a *fibula* on the right shoulder. An orb surmounted by a cross in the right hand.
Rev. VICTORIA AVÇHE
Cross potent on three steps.
In the exergue OBXX
Weight: 3.69 grammes Dumbarton Oaks⁷⁴
117. *Obv.* dNHERACLI 4SPPAVC
Similar to the preceding coin.

Rev. VICTORIA AVS4E

Similar to the preceding coin.

In the exergue OBXX

Weight: 3.69 grammes

Werner 75⁷⁵

Heraclius and Heraclius Constantine

118. *Obv.* ddNNhERACLI4SETh[ERACONSTPPA]

Bust of Heraclius (on left) with short beard and smaller bust of youthful Heraclius Constantine (on right) facing front; each wears a crown with a circular ornament in front surmounted by a cross; each also wears the *paludamentum* clasped by a *fibula* on the right shoulder. A small cross above and between the heads.

Rev. VICTORIA AVS4B

Cross potent on three steps.

In the exergue BOXX

Weight: 3.89 grammes

Leiden⁷⁶

119. *Obv.* ððNNhERACLI4SEThERACONSTPPA

Similar to the preceding coin.

Rev. VICTORIA AVS4B

Similar to the preceding coin.

In the exergue BOXX

Weight: 3.73 grammes

British Museum⁷⁷

120. *Obv.* ddNNhERACLI4SEThERACONSTPPA

Similar to the preceding coin.

Rev. VICTORIA AVS4B

Similar to the preceding coin.

In the exergue BOXX

Weight: 3.69 grammes

Luschin von Ebengreuth, p. 35⁷⁸

121. *Obv.* ððNNhERACLI4SEThERACONSTPPA

Similar to the preceding coin.

Rev. VICTORIA AVS4B

Similar to the preceding coin.

In the exergue BOXX

Weight: not given

Goodacre, p. 97⁷⁹

122. *Obv.* ddNNhERACLI4SEThERACONSTPP

Similar to the preceding coin.

Rev. VICTORIA AVS4B

Similar to the preceding coin.

In the exergue BOXX

Weight: 3.70 grammes ↑↙

Budapest⁸⁰

123. *Obv.* Inscription not given but probably similar to the preceding coin.
Description not given but probably similar to the preceding coin.

Rev. VICTORIA AVS4B

Similar to the preceding coin.

In the exergue BOXX

Weight: not given

Hess Sale, 24 May 1886, 772

124. *Obv.* [ddNNhERACLI4SEThERACONSTPPA]

Similar to the preceding coin.

Rev. VICTORIA AVS4Γ

Similar to the preceding coin.

In the exergue [BO]XX

Weight: not given

Liverpool Museum⁸¹

125. *Obv.* [d]dNNhERACLI4S[ETHERACO]NSTPP[A]

Similar to the preceding coin.

Rev. VIC[TO]RIA AVS4Γ

Similar to the preceding coin.

In the exergue BOXX

Weight: 3.065 grammes Fries Museum, Leeuwarden, Inv. No. 355⁸²

126. *Obv.* ddNNhERACLI4SEThERACONSTPPA

Similar to the preceding coin.

Rev. VICTORIA AVS4Γ

Similar to the preceding coin.

In the exergue BOXX

Weight: 3.67 grammes

Naville Sale III, 16 June 1922, 305⁸³

127. *Obv.* ddNNhERACLI[4SEThE]RACONSTPPA

Similar to the preceding coin.

Rev. VICTORIA AVS4Γ

Similar to the preceding coin.

In the exergue BOXX

Weight: 3.70 grammes ↑↙

Budapest⁸⁴

128. *Obv.* ddNNhERACLI4S€[T]hERACONSTPPA

Similar to the preceding coin.

Rev. VICTORIA AVS4Δ'

Similar to the preceding coin.

In the exergue OBXX

Weight: 3.71 grammes ↑↙

Budapest⁸⁵

129. *Obv.* ddNNhERACLI4SEThERACONSTPPA

Similar to the preceding coin.

11*

Rev. **VICTORIA AVS4E**

Similar to the preceding coin.

In the exergue **OB+***

Weight: 4.0936 grammes

Coll. Grierson⁸⁴

130. *Obv.* **ddNNhERACLI4SEThERACONSTPPAV**

Similar to the preceding coin.

Rev. **VICTORIA AVS4E**

Similar to the preceding coin.

In the exergue **OBXX**

Weight: 3.66 grammes ↑↙

Budapest⁸⁷

131. *Obv.* **ddN.4SEThERACONSTPPA**

Similar to the preceding coin.

Rev. **VICTORIA AVS4E**

Similar to the preceding coin.

In the exergue **BOXX**

Weight: not given

British Museum⁸⁸

132. *Obv.* Inscription not given but probably similar to the preceding coin.

Similar to the preceding coin.

Rev. **VICTORIA AVS4E**

Similar to the preceding coin.

In the exergue **BOXX**

Weight: 3.85 grammes

Szentes Museum⁸⁹

133. *Obv.* **ððNNhERACLI4SEThERACONSTPPA**

Similar to the preceding coin.

Rev. **VICTORI AVS4S**

Similar to the preceding coin.

In the exergue **BOXX**

Weight: 3.71 grammes

British Museum⁹⁰

134. *Obv.* **ððNNhERACLI4SEThERACONSTPPA**

Similar to the preceding coin.

Rev. **VICTORIA AVS4S**

Similar to the preceding coin.

In the exergue **BOXX**

Weight: 3.73 grammes

Berlin⁹¹

135. *Obv.* **ððNNhERACLI4SEThERACONSTPPA**

Similar to the preceding coin.

Rev. **VICTORIA AVS4S**

Similar to the preceding coin.

In the exergue **BOXX**

Weight: not given

Lacour Sale⁹²

136. *Obv.* ΤΙΙV.....ΕΤΗΡΑCONS.PPA
Similar to the preceding coin.
Rev. VICT[OR]IA AVΣ4S
Similar to the preceding coin.
In the exergue ΒΟXX
Weight: 3.88 grammes Leiden⁹³
137. *Obv.* ddNNhERACLI4SEThERACONSTPP
Similar to the preceding coin.
Rev. VICTORIA AVΣ4Z
Similar to the preceding coin.
In the exergue ΒΟXX
Weight: 3.725 grammes ↑↓ Munich⁹⁴
138. *Obv.* ddNNhERACLI4SEThERACONSTPP
Similar to the preceding coin.
Rev. VICTORIA AVΣ4Z
Similar to the preceding coin.
In the exergue ΒΟXX
Weight: 3.73 grammes Vienna
139. *Obv.* ddNNhERACLI4SEThERACONS[TPP]
Similar to the preceding coin.
Rev. VICTORIA AVΣ4Z
Similar to the preceding coin.
In the exergue ΒΟXX
Weight: 3.63 grammes ↑↙ Budapest⁹⁵
140. *Obv.* ddNNhERACLI4SEThERACONSTPPA
Similar to the preceding coin.
Rev. VICTORIA AVΣ4Z
Similar to the preceding coin.
In the exergue ΒΟXX
Weight: 3.67 grammes ↑↓ Hermitage
141. *Obv.* [ddNNhERACLI4SEThE]RACONSTPPAV
Similar to the preceding coin.
Rev. VICTORIA AVΣ4H
Similar to the preceding coin.
In the exergue [BO]XX
Weight: 3.69 grammes ↑↓ Budapest⁹⁶
142. *Obv.* ddNNhERACLI4SEThERACONSTPPAVI
Similar to the preceding coin.
Rev. VICTORIA AVΣ4H
Similar to the preceding coin.
In the exergue ΒΟXX
Weight: 3.65 grammes ↑↙ Budapest

143. *Obv.* **ΘΑΝΝΗΡΑΚΛΙΨΕΤΗΡΑΟΝΣΤΡΡΑΥ**
 Similar to the preceding coin.
Rev. **ΒΙΚΤΟΡΙΑ ΑΥΨΗ**
 Similar to the preceding coin.
 In the exergue **ΒΟΧΧ**
 Weight: 3.67 grammes Vienna
144. *Obv.* **ΘΑΝΝ.....ΤΗΡΑΟΝΣΤΡΡΑΥ**
 Similar to the preceding coin.
Rev. **ΒΙΚΤΟΡΙΑ ΑΥΨΗ**
 Similar to the preceding coin.
 In the exergue **ΒΟΧΧ**
 Weight: 3.700 grammes ↑↓ Munich
145. *Obv.* **ΔΔΝΝΗΡΑΚΛΙΨΕΤΗΡΑΟΝΣΤΡΡΑΥ**
 Similar to the preceding coin.
Rev. **ΒΙΚΤΟΡΙΑ ΑΥΨΗ**
 Similar to the preceding coin.
 In the exergue **ΒΟΧΧ**
 Weight: 3.68 grammes Canessa Sale, 28 June 1923, 675
146. *Obv.* **ΔΔΝΝΗΡΑΚΛΙΨΕΤΗΡΑΟΝΣΤΡΡ**
 Similar to the preceding coin.
Rev. **ΒΙΚΤΟΡΙΑ ΑΥΨΗ**
 Similar to the preceding coin.
 In the exergue **ΒΟΧΧ**
 Weight: 3.68 grammes Copenhagen⁹⁷
147. *Obv.* **ΔΔΝΝΗΡΑΚΛΙΨΕΤΗΡΑΟΝΣΤΡΡΑΥ**
 Similar to the preceding coin.
Rev. **ΒΙΚΤΟΡΙΑ ΑΥΨΗ**
 Similar to the preceding coin.
 In the exergue **ΒΟΧΧ**
 Weight: not given Hess Sale, 24 Nov. 1937, 229
148. *Obv.* **ΔΔΝΝΗΡΑΚΛΙΨ.....ΡΡΑΥ**
 Similar to the preceding coin.
Rev. **ΒΙΚΤΟΡΙΑ ΑΥΨΗ**
 Similar to the preceding coin.
 In the exergue **ΒΟΧΧ**
 Weight: 3.72 grammes ↑↓ Hermitage⁹⁸
149. *Obv.* **ΔΔΝΝΗΡΑΚΛΙΨΕΤΗΡΑΟΝΣΤΡΡΑ**
 Similar to the preceding coin.
Rev. **ΒΙΚΤΟΡΙΑ ΑΥΨΗ**
 Similar to the preceding coin.
 In the exergue **ΒΟΧΧ**
 Weight: 3.76 grammes ↑↙ Hermitage⁹⁹

150. *Obv.***ERACLI4S. . . ERA.**
 Similar to the preceding coin.
Rev. **VICTORIA AVS4I**
 Similar to the preceding coin.
 In the exergue **BOXX**
 Weight: 3.75 grammes The Hague¹⁰⁰
151. *Obv.* **ddNNhERACLI4SETHERACONSTPPAVC**
 Similar to the preceding coin.
Rev. **VICTORIA AVS4I**
 Similar to the preceding coin.
 In the exergue **BOXX**
 Weight: not given Sabatier 48¹⁰¹
152. *Obv.* Inscription not given but probably similar to the preceding coin.
 Similar to the preceding coin.
Rev. **VICTORIA AVS4S**
 Similar to the preceding coin.
 In the exergue **BOXX**
 Weight: 3.66 grammes Coll. Windisch-Grätz ¹⁰²
153. *Obv.* Inscription obliterated but probably similar to the preceding coin.
 Similar to the preceding coin.
Rev. Inscription obliterated but probably similar to the preceding coin.
 Similar to the preceding coin.
 In the exergue **[BOX]X**
 Weight: 12.45 grammes Werner 77¹⁰³
154. *Obv.* **ddNNh.**
 Similar to the preceding coin.
Rev. **V[ICT]OR[IA AVS4.]**
 Similar to the preceding coin.
 In the exergue **OBXX**
 Weight: 6.02 grammes Werner 76¹⁰⁴
155. *Obv.* **. . . NhERA.**
 Similar to the preceding coin.
Rev. **VICT[ORIA] AVC.**
 Similar to the preceding coin.
 In the exergue **BOX[X]**
 Weight: 3.74 grammes Werner 78¹⁰⁵
156. *Obv.* Inscription not given but probably similar to the preceding coin.
 Description not given but probably similar to the preceding coin.

Rev. Inscription not given but probably similar to the preceding coin.
Description not given but probably similar to the preceding coin.
In the exergue **BOXX**

Weight: 3.65 grammes

Monneret De Villard, p. 35¹⁰⁶

157. *Obv.* Inscription not given but probably similar to the preceding coin.
Description not given but probably similar to the preceding coin.

Rev. Inscription not given but probably similar to the preceding coin.
Description not given but probably similar to the preceding coin.
In the exergue **BOXX**

Weight: 3.52 grammes

Monneret De Villard, p. 35¹⁰⁷

158. *Obv.* Inscription not given but probably similar to the preceding coin.
Description not given but probably similar to the preceding coin.

Rev. Inscription not given but probably similar to the preceding coin.
Description not given but probably similar to the preceding coin.
In the exergue **OBXX**

Weight: 3.60 grammes

Castello Sforzesco¹⁰⁸

Barbarian Imitation of Heraclius and Heraclius Constantine

159. *Obv.* **IIOC**

Bust of Heraclius (on left) with short beard and smaller bust of youthful Heraclius Constantine (on right) facing front; each wears a crown with a circular ornament in front surmounted by a cross; each also wears the *paludamentum* clasped by a *fibula* on the right shoulder. A small cross above and between the heads.

Rev. **NCΓOOMVITOIIA**

Cross potent on three steps.

In the exergue **XVOX**

Weight: 4.002 grammes

Cahn Sale 75, 30 May 1932, 1847¹⁰⁹

Heraclius, Heraclius Constantine and Heracleonas

160. *Obv.* Anepigraphic

Heraclius (in center), Heraclius Constantine (on right), and Heracleonas (on left) standing facing front. The last two figures are of equal height while that of Heraclius is slightly larger. Each wears long robes and a crown surmounted by a cross and holds in his right hand an orb surmounted by a cross. Heraclius alone has a large mustache and a long beard.

Rev. VICTORIA AVÇ4Є

Cross potent on three steps. In the field to the left **⳨** (the monogram of Heraclius).

In the exergue **OBXX**

Weight: 3.73 grammes ↑↓

Hermitage¹¹⁰

161. Obv. Anepigraphic

Similar to the preceding coin.

Rev. VICTORIA AVÇ4Є

Similar to the preceding coin.

In the exergue **OBXX**

Weight: 3.65 grammes ↑ ↙

Hermitage¹¹¹

162. Obv. Anepigraphic

Heraclius (in center), Heraclius Constantine (on right), and Heracleonas (on left) standing facing front. The last two figures are of equal height while that of Heraclius is slightly larger. Each wears long robes and a crown surmounted by a cross and holds in his right hand an orb surmounted by a cross. Heraclius alone has a large mustache and a long beard.

Rev. VICTORIA AVÇ4Є

Cross potent on three steps. In the field to the left **⳨** (the monogram of Heraclius) and in the field to the right the letter **A**.

In the exergue **BOXX**

Weight: 3.600 grammes

Poltawa Museum¹¹²

163. Obv. Anepigraphic

Similar to the preceding coin.

Rev. VICTORIA AVÇ4Є

Similar to the preceding coin.

In the exergue **DOXX**

Weight: 3.200 grammes

Poltawa Museum¹¹³

164. Obv. Anepigraphic

Heraclius (in center), Heraclius Constantine (on right), and Heracleonas (on left) standing facing front. The last two figures are of equal height while that of Heraclius is slightly larger. Each wears long robes and a crown surmounted by a cross and holds in his right hand an orb surmounted by a cross. Heraclius alone has a large mustache and a long beard.

Rev. VICTORIA AVÇ4Є

Cross potent on three steps. In the field to the left **⳨** (the monogram of Heraclius) and in the field to the right the letter **B**.

In the exergue **BOXX**

Weight: 3.38 grammes ↑↓

Hermitage¹¹⁴

165. *Obv.* Probably anepigraphic
Description incomplete but probably similar to the preceding coin.
Rev. Inscription not given but probably similar to the preceding coin.
Description not given but probably similar to the preceding coin.
In the exergue **BOXX+**
Weight: not given Bauer, pp. 227–229¹¹⁵

Constans II

166. *Obv.* **ΘNCONSTAN ZIN4SPPAV**
Bust of Constans II with short beard facing front. The Emperor wears a crown with a circular ornament in front surmounted by a cross. He also wears the *paludamentum* clasped by a *fibula* on the right shoulder. An orb surmounted by a cross in the right hand.
Rev. **VICTORIA AV54Θ**
Cross potent on three steps.
In the exergue **OBXX**
Weight: 3.700 grammes Poltawa Museum¹¹⁶
167. *Obv.* **ΘNCONSTAN ZIN4SPPA>**
Similar to the preceding coin.
Rev. **VICTORIA AV54Θ**
Similar to the preceding coin.
In the exergue **OBXX**
Weight: 3.250 grammes Poltawa Museum¹¹⁷
168. *Obv.* **ΘNCONSTAN ZIN4SPPA**
Similar to the preceding coin.
Rev. **VICTORIA AV54I**
Similar to the preceding coin.
In the exergue **OBXX**
Weight: 3.71 grammes ↑↓ Hermitage¹¹⁸
169. *Obv.* **δNCONSTAN.....**
Bust of Constans II with large mustache and a long beard facing front wearing a crown surmounted by a cross. The Emperor wears the *paludamentum* clasped by a *fibula* on the right shoulder. An orb surmounted by a cross in the right hand.
Rev. **VICTOR[1]A AV54A**
Cross potent on three steps.
In the exergue **BOFK**
Weight: 4.27 grammes ↑↙ Hermitage¹¹⁹

170. *Obv.* **ΔΝCΟNΣTΑΝ TIN4SPPAV**
 Similar to the preceding coin.
Rev. **VICTORIA AVC4E**
 Similar to the preceding coin.
 In the exergue **BOΓK**
 Weight: 4.27 grammes American Numismatic Society¹²⁰
171. *Obv.* **ΔΝCΟNΣTΑΝ TIN4SPPAV**
 Similar to the preceding coin.
Rev. **VICTORIA AVC4E**
 Similar to the preceding coin.
 In the exergue **BOΓK**
 Weight: 4.20 grammes Hermitage¹²¹
172. *Obv.* **ΔΝCΟNΣTΑΝ TIN4SPPAV**
 Similar to the preceding coin.
Rev. **VICTORIA AVC4S**
 Similar to the preceding coin.
 In the exergue **BOΓK**
 Weight: 4.30 grammes Monnaies et Médailles Sale XIII,
 17–19 June 1954, 824¹²²
173. *Obv.* **ΔΝCΟNΣTΑΝ TIN4SPPAV**
 Similar to the preceding coin.
Rev. **VICTORIA AVC4S**
 Similar to the preceding coin.
 In the exergue **BOΓK**
 Weight: not given Ratto Sale, 26–29 Jan. 1955, 1244
174. *Obv.* **ΔΝCΟNΣTΑΝ TIN4SPPAV**
 Similar to the preceding coin.
Rev. **VICTORIA [AV]C4S**
 Similar to the preceding coin.
 In the exergue **BOΓK**
 Weight: 3.58 grammes Hirsch Sale XVIII, 27 May 1907, 1989¹²³
175. *Obv.* **ΔΝCΟNΣTΑΝ.**
 Similar to the preceding coin.
Rev. **V[ICTO]RIA AVC4S**
 Similar to the preceding coin.
 In the exergue **BOΓK**
 Weight: 4.37 grammes ↑↓ Hermitage¹²⁴

*Constans II and Constantine IV Pogonatus
and
Heraclius and Tiberius*

176. *Obv.* dNC. . . . AN. . . .

Bust of Constans II, with long beard and large mustache, and smaller bust of Constantine IV beardless. Both are facing front and wearing *paludamenta* which are clasped on the right shoulder by a *fibula*. Constans II wears a plumed helmet with a circular ornament in front surmounted by a cross. Constantine IV wears a crown surmounted by a small orb bearing a cross. Between the two heads a small cross.

Rev. VICTORIA AVC4Δ

Long cross potent on three steps. Figure of Heraclius (on left) and somewhat smaller figure of Tiberius (on right) standing facing front. Each wears long robes and a crown surmounted by a cross and holds an orb surmounted by a cross in his right hand.

In the exergue BOXX

Weight: 3.6613 grammes

Coll. Grierson¹²⁵

177. *Obv.* AN.

Similar to the preceding coin.

Rev. VICTORIA [AV]Σ4Θ

Similar to the preceding coin.

In the exergue BOXX

Weight: 3.73 grammes ↑↓

Hermitage

Constantine IV Pogonatus

178. *Obv.* ΘNCONST IN4SPP

Bust of Constantine IV beardless facing. He wears a cuirass and a helmet with a crest. In his right hand he holds a spear transversely so that the tip extends upwards to the left behind his head. In his left hand he holds a shield bearing the horseman device.

Rev. VICTORIA AVΣ4A

Long cross potent on three steps. Figure of Heraclius (on left) and somewhat smaller figure of Tiberius (on right) standing facing front. Each wears a long robe and a crown surmounted by a cross and holds an orb surmounted by a cross in his right hand.

In the exergue BOXX

Weight: 3.59 grammes ↑↓

Hermitage¹²⁶

179. *Obv.* ΘΝΟ Α ΝΥΣΡ

Bust of Constantine IV, bearded facing front. He wears a cuirass and a helmet with a crest. In his right hand he holds a spear transversely so that the tip extends upwards to the left behind his head. In his left hand he holds a shield bearing the horseman device.

Rev. VICTORIA AVΣCI

Long cross potent on three steps. Figure of Heraclius (on left) and somewhat smaller figure of Tiberius (on right) standing facing front. Each wears a long robe and a crown surmounted by a cross and holds an orb surmounted by a cross in his right hand.

In the exergue ΒΟΧΧ

Weight: 3.64 grammes ↑↓

Hermitage¹²⁷

APPENDIX OF C+N+B COINS

*Tiberius II Constantine*180. *Obv.* ΔΘΤΙΒCONS ΤΑΝΤΡΡΑΥC

Bust of Tiberius Constantine facing front wearing a cuirass and a crown surmounted by a cross. An orb surmounted by a cross in the right hand; shield bearing the horseman device in the left hand.

Rev. VICTORI AAVCCT

Cross potent on four steps.

In the exergue C+B+N

Weight: not given

Hess Sale, 24 May 1886, 682¹²⁸

181. *Obv.* Inscription similar to the preceding coin.

Similar to the preceding coin.

Rev. Inscription similar to the preceding coin.

Similar to the preceding coin.

In the exergue C+N+B

Weight: not given

Mionnet, II, p. 425

182. *Obv.* Inscription similar to the preceding coin.

Similar to the preceding coin.

Rev. Inscription similar to the preceding coin.

Similar to the preceding coin.

In the exergue C+N+B

Weight: not given

Akerman, II, p. 407

*Maurice Tiberius*183. *Obv.* **DNMAVRC TIBPPAVC**

Bust of Maurice Tiberius facing front, helmeted (with circular ornament in front and plume) and wearing a cuirass with *paludamentum* clasped by *fibula* on the right shoulder. An orb surmounted by a cross in the right hand.

Rev. **VICTORI AAVCCI**

Victory standing facing front wearing chiton and peplos. A globe surmounted by a cross in the left hand; a long cross ending in the letter **P** (the Christogram) in the right hand.

In the exergue **C+N+B**

Weight: 4.04 grammes

British Museum¹²

NOTES TO THE CATALOGUE

¹ This particular coin is also listed in the Tolstoi Collection, the greater part of which was acquired by the Hermitage. Tolstoi purchased this coin in St. Petersburg, and he listed its weight as 4.00 grammes. He suggested that the style of both the obverse and reverse indicated that the piece was struck in Constantinople. In his view the workmanship clearly did not point towards Italian mintmasters. Tolstoi, p. 295, No. 22. See note 19. This was the only light weight solidus of the Emperor Justinian which was struck in the ninth *officina*.

Since it is customary, the figure on the reverse has been described throughout the text and catalogue as a Victory, but it should be pointed out that instead of the high-girdled standing female figure found on the coinage prior to the reign of Justin I this is a frontal archangel clad in tunic and pallium. The late Prof. Albert Friend suggested that there might be some connection between the new male figure of an archangel which was introduced on the coinage in the reign of Justin I and the extant panel of an ivory diptych in the British Museum showing an archangel holding a staff in his right hand and a *globus cruciger* in his left standing on the steps of an arched doorway. A. A. Vasiliev, *Justin the First. An Introduction to the Epoch of Justinian the Great* (Cambridge, Mass., 1950), p. 384.

² This coin was found in a Lombard grave at Udine. Stefan lists it as Coll. Gigoi, 1139bis in the Museo Civico of Udine. He suggests that it may have been a southern Gallic imitation of the coinage of the Exarchate of Ravenna. According to him it was probably struck after 555 A.D. The reverse of the coin as well as the obverse actually do not show any traces of barbarian influence, and it is, therefore, most likely that this coin is of official Roman origin.

³ This piece was formerly in the Tolstoi Collection. Tolstoi bought this coin in Odessa and gave its weight as 3.7 grammes. He surmised that it was issued in the East. Tolstoi, p. 295, No. 23. See note 19.

⁴ This piece was also formerly part of the Tolstoi Collection, but it was not illustrated in the published catalogue. Tolstoi gives the weight of this coin as 3.65 grammes and describes it as the same as the preceding coin but a variant design of both obverse and reverse. He purchased this solidus in St. Petersburg and felt that it had been struck in the East. Tolstoi, p. 295, No. 24. See note 19.

⁵ This coin is presently in the collection of Mr. Enrico Leuthold of Milan. It has a die identity on the reverse with Coins nos. 6, 7, 8, and 9. The obverse is from the same die as Coin no. 7.

⁶ This piece has a die identity on the reverse with Coins nos. 5, 7, 8, and 9, and a die identity on the obverse with Coins nos. 8 and 23.

⁷ This piece is from the same pair of dies as Coin no. 5.

⁸ This coin was analyzed by the specific gravity technique for fineness by Mr. Grierson. The results are reported in Chapter II. The obverse of this piece is from the same die as Coins nos. 6 and 23, and the reverse is from the same die as Coins nos. 5, 6, 7, and 9.

⁹ A cast of this coin was taken in 1951 by Mr. Philip Grierson. At that time it was in the possession of Dr. Herbert Cahn. Mr. Grierson kindly furnished a copy of the photograph of that cast. The obverse of this piece is from the same die as Coin no. 21, and the reverse is from the same die as Coins nos. 5, 6, 7, and 8.

¹⁰ Tolstoi, p. 295 lists this coin and the next one. He gives the weights as 3.15 and 3.6 grammes, but he does not distinguish between the two coins or attribute the weights to each specifically. Only one of these coins, the next one, is illustrated in Tolstoi's catalogue. Dr. Belov of the staff of the Hermitage noted that this piece was No. 25 in Tolstoi's catalogue. One of these coins was purchased by Tolstoi in Odessa and the other in the Caucasus. Tolstoi says that these two coins are the same as his No. 24 (Coin no. 4) but with a different design on the obverse. The photographs show that both the obverse and reverse of this piece are similar to Coin no. 4, but that the cross in the hand of Victory on the reverse of the next piece is different. It was Tolstoi's belief that these coins were struck in the East. See note 19.

¹¹ This solidus, as can be seen, has been badly clipped.

¹² This coin is pierced.

¹³ The obverse legend contains a malformed **A** which is upside down (**∇**). The coin, however, is clearly an authentic Byzantine piece. Ratto included a note in his catalogue indicating that he was unable to determine whether this particular series was destined for a specific area within the Empire or for the Empire as a whole. He does say, however, that the rarity of these coins indicates a small issue. In addition, he points out that he knows of no other light weight solidi after the reign of Marcian until this series was inaugurated. It would be difficult, if not impossible, to prove that prior to Marcian light weight solidi were regularly issued as a distinctive series.

¹⁴ Mr. R. A. G. Carson, who very kindly furnished the information regarding this coin, pointed out that all that was known regarding its provenance was that it came to the British Museum from the Royal Collection (George III) in 1823.

¹⁵ The obverse shows a die identity with Coin no. 9, and the reverse comes from the same die as Coin no. 23.

¹⁶ This coin was analyzed by Mr. Philip Grierson by the specific gravity technique to determine its fineness, and the results are reported in Chapter II. The coin has been slightly clipped according to Mr. Grierson. Particular note should be taken of the Italic **D** in the reverse exergue in place of **B**. It is one of the few coins of western origin in this series.

¹⁷ As in the case of Coin no. 9, a cast of this coin was taken in 1951 by Mr. Philip Grierson. At that time it was in the possession of Dr. Herbert Cahn. Mr. Grierson very kindly furnished a copy of the photograph of that cast. The obverse of this piece is from the same die as Coins nos. 6 and 8, and the reverse is from the same die as Coin no. 21.

¹⁸ Luschin von Ebengreuth cites this coin as being in the Imperial Collection in Vienna, but it does not seem to be in Vienna at present. Monneret De Villard, p. 33, also cited this coin as being in Vienna.

¹⁹ Tolstoi, pp. 295-296, No. 26, gives the weight of this piece as 3.75 grammes. He describes the obverse as similar to his No. 23 (Coin no. 3) and the reverse as the same as that very coin save for the most unusual mark in the exergue of

this specimen. According to Tolstoi, Coins nos. 1, 3, 4, 11, 12, and 28 were struck in the East and not in the West. This conjecture, which he based on style, was supposedly supported by the fact that all of these pieces were acquired in Russia and three of them in the southern portion of that country. Since coins are among the most easily transported objects, and these coins were not found *in situ*, this can hardly be considered a proof of any great consequence. Gold coins move very easily through the channels of trade. Tolstoi further conjectured that since the inscription in the exergues on the reverses and the style of the individual pieces did not indicate Constantinople as the place of manufacture, they might have been struck somewhere in Asia Minor.

²⁰ The mark in the exergue is found only on this coin before the reign of Tiberius Constantine. After that it is relatively common.

²¹ A. de Belfort, IV, p. 75, gives the mark in the exergue of the reverse as OBX-X. The line drawing, however, which is found in Belfort's book and is reproduced in the plates of this monograph, contains the correct form of the mark. This may be confirmed by comparison with Coin no. 32 in this catalogue. These two coins seem to be strikingly similar, but it is hardly likely that an identification can be established. Belfort speaks of a swelling on the edge of the coin (*renflement au portour*) which he describes as in the Cabinet de France whereas Coin no. 32, which is also in the Bibliothèque Nationale, appears to have been slightly clipped.

²² This piece appears to have been slightly clipped.

²³ Note the form of the B in the mark in the exergue. This form for the letter is normally attributed to Italy. The garbelled legend is senseless. Stefan reads the inscription as NVSITIN!-ST. VI:PPN. on the obverse and VICTOV AVT<Γ on the reverse. He also suggests that the coin may have been struck in Pannonia by the Lombards at some time around 560 A.D., but definitely prior to 584/85. The site of the find is unknown, but the coin was kept in the Kaiser Friedrich Museum in Berlin at the time that Stefan wrote his article.

²⁴ This coin was purchased by Tolstoi in Paris. The style of the reverse is not good, but it seems to be an authentic Byzantine piece. According to John of Ephesus, *Hist. Eccl.*, III, 14, this seated figure of Constantinopolis personified on the coinage of Justin II was confused in the popular mind with Venus.

²⁵ This piece is probably the one referred to by Monneret De Villard, p. 34, as having a weight of 3.737 grammes.

²⁶ Coin no. 37 is pierced twice.

²⁷ Coin no. 38 is pierced.

²⁸ Luschin von Ebengreuth mentions this coin as being in the Royal Collection in Berlin, but there does not seem to be a coin in Berlin at present which corresponds to it. Monneret De Villard, p. 34, also cited this piece as being in Berlin.

²⁹ This coin is from the great hoard of Byzantine gold which was recently found in the region of Hama in Syria. Unfortunately the hoard very rapidly passed into the hands of a dealer and the channels of the coin trade. The hoard was therefore never studied in its entirety. Approximately 150 of the pieces had been disposed of by the dealer before rubbings were taken of the remainder, about 326 pieces, by Professor Henri Seyrig. The rubbings were sent to Mr. Philip Grierson who very kindly forwarded those of the light weight solidi for this study. Coins nos. 47, 49, 58-65, are also from the same hoard.

³⁰ This coin is probably the one referred to by Monneret De Villard, p. 34, as having a weight of 3.514 grammes.

³¹ This coin also appeared in the Hess Sale of 24 May 1886. The photograph in the sale catalogue is very poor, but there seems to be no doubt of the identification. The piece is certainly genuine.

³² Stefan, p. 63, lists this coin as part of his own collection in Graz. It was found at an unknown location in the Balkans. Stefan suggests that it was struck in Thessalonica after 565 A.D. as an imitation of the types struck at Constantinople. The photograph indicates that the coin is somewhat worn on both the obverse and reverse, but Stefan merely notes that the reverse is worn.

³³ Stefan, p. 62, lists this piece as in the National Museum at Sofia. It was found at Sadowetz, in the district of Plevna, in northern Bulgaria. Like the last piece, Stefan suggests that it was struck in Thessalonica after 565 A.D. as an imitation of the types struck at Constantinople. He also noted that it is somewhat worn on both the obverse and reverse, but the photograph would seem to indicate a better state of preservation than that of the preceding coin.

³⁴ The coin has been clipped, and the weight is therefore of little value.

³⁵ The photograph shows the coin to be badly worn.

³⁶ This coin was formerly in the collection of Count Tolstoi who purchased it in St. Petersburg. He listed its weight as 3.7 grammes. Tolstoi, p. 418, No. 17.

³⁷ Coins nos. 58 and 59 show a die identity on the reverse.

³⁸ See the preceding note.

³⁹ Tolstoi, p. 418, No. 19, gives the weight of this piece, which was formerly in his collection, as 4.00 grammes. He bought it at Amsterdam. He points out that there is no reading of the mark in the exergue which makes sense. It was his contention that this coin was most probably not of barbarian workmanship, but that it was struck in Italy. Actually the poor modelling of the reverse and the letter forms seem to indicate a clearly barbarian origin for this piece. It fits in well with the following pieces which are more obviously barbaric. The P at the end of the inscription is normally taken as indicating the Ravenna mint, but this piece is obviously not from that mint. Cf. Coin no. 90.

⁴⁰ Stefan, p. 60, says that this coin, which is excellently preserved, was found at Hoischhügel near Maglern-Thörl. It is in the municipal museum at Villach. Stefan believed it to be a southern Gallic imitation struck after 565 A.D. The figure of Constantinople on the reverse is clearly barbaric.

⁴¹ This coin was found in the Lombard graveyard at Cividale, and it is in the museum of that city. Stefan describes it as *Stempelfrisch*, but the photograph seems to indicate signs of wear. As in the case of the preceding coin, Stefan suggests that it is a southern Gallic imitation of a coin of Ravenna. It is clearly of barbarian manufacture.

⁴² This coin was found at Muningen in the district of Nordlingen, north of the Danube between Stuttgart and Munich. It was part of a funerary deposit and is now in the museum at Gunzenhausen. Werner describes the condition of this piece as *fast frisch*. Cf. Dr. Julius Cahn, "Ein Goldmünzenfund des frühen 7. Jahrhunderts aus dem Grabfeld von Munningen," *Frankfurter Münzzeitung*, II, No. 22 (Oct. 1931), p. 326, and Abb. 1, 2. Cahn described this coin as a slightly barbaric south Germanic imitation of a solidus of Justin II.

⁴³ The final symbol in the reverse legend may be read as Σ . The piece is clearly barbaric.

⁴⁴ This piece is cited by Monneret De Villard, p. 34. It has been impossible to obtain a cast or a photograph of this coin, but it would seem to belong in this series of barbaric imitations.

⁴⁵ H. Mattingly, "A New Byzantine Coin," *British Museum Quarterly*, XIII, No. 1 (1939), p. 16. Mattingly noted the remains of the cross surmounting the globe on the reverse. These remains are discernable on the photograph, but they were overlooked by later authors. Actually the traces of the cross are so slight that it seems possible that an attempt was made to obliterate the cross from the die. Mattingly also attributed the coin correctly to Justin II and Tiberius II Constantine. The coin was acquired by the British Museum in 1938 by purchase in Syria from a Syrian coin dealer. Cf. Hugh Goodacre, "Justinian and Constantine," *Numismatic Chronicle*, Series 6, I (1941), pp. 48–53, and Charles Oman, "A Gold Solidus of A.D. 578: A Reattribution," *Numismatic Chronicle*, Series 6, II (1942), pp. 104–105. This coin has been double struck, but the obverse occurs with a die identity on a coin of the Kyrenia treasure. A spatula and chain which may be connected with the coin from Cyprus were recovered from the same people who had the so-called Kyrenia girdle, but there is no proof that they were definitely associated in the find. The mounted coin is in the museum at Nicosia and is published here with the permission of the authorities of that museum.

79a. *Obv.* DNIVSTINIETCONSTAN

Busts of Justin and Tiberius Constantine wearing crowns and *paludamenta* facing front. A small cross above the heads.

In the exergue PPAVC

Rev. VICTORI AAVCCCA

Victory standing facing front wearing chiton and peplos. A globe surmounted by a small cross in the left hand; a long cross ending in the letter P (the Christogram) in the right hand.

In the exergue CONOB

Weight: not given

Nicosia Museum

On the relationship between these two coins and the entire question of the Kyrenia find and the unusual girdle that forms a part of it see Philip Grierson, "The Kyrenia Girdle of Byzantine Medallions and Solidi," *Numismatic Chronicle*, Series 6, XV (1955), pp. 55–70. Grierson cites all of the important earlier literature.

There is a possibility that both Coin no. 79 and the Kyrenia coin were struck in Antioch in Syria, for aside from the relatively close find spot of the Kyrenia coin and the purchase locations of the two coins there is corroborating evidence. Antioch was the only place apart from Carthage which struck coins with two busts. Other places struck coins with two emperors or the emperor and heir-apparent seated, but the tradition of striking twin busts facing front at this time seems to have existed at Antioch. See Chapter III.

These coins can be accurately dated. Justin II during the latter part of his reign had lost his reason, and as early as December 574 A.D. Tiberius II Constantine had been created Caesar and had administered the Empire in conjunction with the Empress Sophia. During a short period of lucidity, however, Justin II was prevailed upon to associate Tiberius II Constantine with himself as Augustus on September 26, 578. He even went so far as to crown the new Augustus with his own hand on that day. On October 5 of the

same year, however, Justin II died, so that this group of two coins must have been struck between September 26 and October 5, 578 A.D. Charles Oman, *op. cit.*, pp. 104-105.

It is worth noting that the type of Victory standing facing front aside from these two pieces occurs for the reigns of Justinian, Maurice Tiberius, and Phocas. These two solidi are the only known instances of that type during the reigns of either Justin II or Tiberius II Constantine.

⁴⁶ There is a die identity of both the obverse and reverse with Coin no. 86. BMC, *Byz.*, I, p. 106, No. 9.

⁴⁷ This coin and the next one were included in Tolstoi, p. 416, No. 12. Tolstoi gives a weight of 4.1 grammes for each of them, but he only illustrated one of them, the first. This is probably the one from his own collection which he purchased in Vienna. Coin no. 83 was in the Imperial Hermitage when Tolstoi compiled his catalogue, and both specimens are to be found there now.

⁴⁸ See the preceding note.

⁴⁹ This coin has been pierced.

⁵⁰ This piece was formerly in the Tolstoi Collection. Tolstoi, p. 479, No. 12a, says that this piece is the same as his No. 12 (Coins nos. 82 and 83) except that the legend of the reverse ends with the letters ΘSS. This is actually not so because only the barest trace of the V in the latter part of the reverse inscription remains on this coin. There are clear signs of double striking which can serve to explain the second S and the peculiar condition of the V. Tolstoi bought this coin at St. Petersburg. See Chapter III for a further treatment of this piece.

⁵¹ This coin shows a die identity on the obverse and reverse with Coin no. 81.

⁵² Monneret De Villard, p. 34, mentions two light weight solidi from the reign of Maurice Tiberius in the collection at Budapest, and he gives their weights as 3.695 and 3.703 grammes. He records the exergual marks on these pieces as OB+*, but it seems more than likely that he has made an error in transcribing this mark. The two pieces recorded above are probably to be identified with those cited by him.

⁵³ See the preceding note.

⁵⁴ The style of this piece is quite rough. The P at the end of the reverse inscription is often taken to indicate the mint of Ravenna. The piece appears to be an authentic byzantine solidus of western fabric though the mint cannot be identified with certainty. That the Victory on the reverse holds a globe surmounted by a cross is unusual.

⁵⁵ This coin is mounted with a loop at the top of the obverse. It is the type of mount which is familiar in Frisia or England or northern France during the sixth and seventh centuries.

⁵⁶ This coin was examined by the specific gravity technique by Mr. Philip Grierson, and the results have been reported in Chapter II.

⁵⁷ This piece was formerly in the Tolstoi Collection, and its weight is given by Tolstoi as 3.95 grammes. Tolstoi, p. 515, No. 35, notes that this piece came to him from the Barron Collection. The Barron Collection was sold as part of Hirsch Sale XXXI, 6 May 1912, (lot 2137). In describing the coin Dr. Hirsch transcribed the mark in the exergue as ΘS+* and gave its weight as 3.96 grammes. Monneret De Villard, p. 34, gives the correct reading of the mark in the exergue as shown by the photograph.

⁵⁸ The mark in the exergue is given as **DB+ *** in the catalogue, but the **D** should obviously be an **O**.

⁵⁹ This coin was formerly part of the Cantacuzene Collection. It was sold as lot 50 of the Glendining Sale of 8 Dec. 1922. According to the description in the sale catalogue the Emperor is wearing a crown, but the illustration clearly indicates a helmet surmounted by a cross. This is very unusual because the other solidi, both of normal and light weight, struck during this reign show a helmet with a plume.

⁶⁰ This piece appears to have a small punch hole.

⁶¹ Tolstoi, p. 586, No. 24, mentions this piece from the Hermitage, but he gives its weight as 3.75 grammes. This coin has been pierced.

⁶² On the basis of the general outline of the coin and the location of the punch hole, this would seem to be the same coin as that illustrated by a line drawing by Sabatier. See Sabatier, pl. XXVI, 27–28.

⁶³ The reverse inscription was apparently improperly transcribed because the final symbol is meaningless.

⁶⁴ I do not believe that the mark above the globe in the hand of Victory on the reverse is the remnant of a cross which surmounted that globe. The gap between the mark and the globe would be inexplicable in terms of wear.

⁶⁵ This coin is cited by Münsterberg, p. 228. Münsterberg gives the reverse inscription as **VICTORIA AVCHC** and the weight as 4.05 grammes.

⁶⁶ Mr. Frederick S. Knobloch informs me that he purchased this coin at the Stack's Sale on 28 June 1938. If that is correct it must have been lot 1737 of that sale and is incorrectly described in the catalogue. The coin was also part of the Faeltens Collection. Stack's Sale, 20–22 Jan. 1938, lot 1813. This coin was struck from the same set of dies as the next piece.

⁶⁷ See the preceding note.

⁶⁸ This coin was struck from the same set of dies as Coins no. 109 and 110.

⁶⁹ See the preceding note.

⁷⁰ See note 68. Monneret De Villard, p. 35, cites four coins of Phocas from the collection at Budapest with the exergual mark **OBXX**. He gives their weights as 3.642, 3.666, 3.693, 3.703 grammes. These are probably Coins nos. 100, 107, 109, and 110 of the Catalogue.

⁷¹ Münsterberg, pp. 227–228, cites a coin which he acquired in 1922, and which is probably to be identified with this piece.

⁷² BMC, *Byz.*, I, p. 164. Wroth attributes this coin to the mint of Constantinople. It is also cited by Tolstoi, p. 586. This coin is from the same set of dies as the next one.

⁷³ Münsterberg lists this coin as being in London, and it may well be that he is describing Coin no. 112 or possibly Coin no. 113. On the other hand, since the form of the reverse inscription given by him appears to be somewhat different, it may well be that he was describing another piece.

⁷⁴ Wroth (BMC, *Byz.*, I, p. 185) dates these coins in the period from *ca.* 610–*ca.* 613. This is done on the basis of the comparisons made with the dated bronze coins. In 613 Heraclius Constantine was crowned. These coins must antedate that event. They are, however, not the first series of solidi issued by Heraclius, for some coins occur showing the Emperor with the typical pointed beard of Phocas. The chronological limits are thus fairly certainly established.

⁷⁵ This coin was found as a stray find at Müllingsen, in the district of Soest. Werner lists it as No. 21277 in the Berlin Cabinet, but it is apparently no longer there. It was cited as being there by Luschin von Ebengreuth, p. 36, as well as by Monneret De Villard, p. 35. This piece may be dated in precisely the same manner as the preceding one.

⁷⁶ This series of coins may be dated by comparison with the dated bronzes. Wroth (BMC, *Byz.*, I, p. 186) places them in the period *ca.* 613/14–*ca.* 630 or later. This series was probably begun about the time of the coronation of Heraclius Constantine in 613. The dated bronzes show that in the year twenty (629/30) Heraclius Constantine was represented with a beard and as equal in stature with his father. See note 98. Cf. J. Dirks, "Trésor de Wieuwerd. Ornaments et monnaies mérovingiennes et byzantines en or," *Revue de la numismatique belge*, XXII (1867), p. 160, and Dr. S. Janssen, "Der merovingische Goldschmuck aus Wieuwerd," *Jahrbücher des Vereins von Alterthumsfreunden im Rheinlande (Bonner Jahrbücher)*, Heft XLIII (1867), p. 71. This coin has a loop attached, and the weight, therefore, is of little value. Dirks, however, seems to indicate a weight of 3.89 grammes. Dr. Janssen described the coin as being of only twenty-two carat gold fineness and the loop of only seventeen carat gold fineness. This coin and Coin no. 136 were part of the hoard of gold coins and ornaments found at Wieuwerd in Frisia. Both coins are listed by Boeles, p. 510. The reverse of this coin comes from the same die as that of coins nos. 119, 121, and 122. The photographs of this piece and Coin no. 136 are apparently enlarged.

⁷⁷ BMC, *Byz.*, I, p. 186, No. 14. Wroth attributed this coin to the mint at Constantinople. The coin is also cited by Tolstoi, p. 657. This piece was struck from the same set of dies as Coin no. 122, and the reverse of the preceding coin is also from the same die.

⁷⁸ Luschin von Ebengreuth, p. 35, mentions this coin as recently acquired by him. The line drawing at the end of the work is not clearly identified as the coin in the Luschin von Ebengreuth Collection, but the probability is very strong that he copied his own piece.

⁷⁹ See note 76.

⁸⁰ See notes 76 and 85.

⁸¹ A photograph of this coin was very kindly furnished by Mr. Philip Grierson who noted it as Coll. Rolfe Mayer 7383. It is mounted and has a loop. The edge of the coin has been tooled, and on the obverse only illegible remains of the inscription have survived this treatment. Mr. Grierson's note indicated that the piece was found in Kent in a seventh century site.

⁸² This piece was probably found at Kornwerd (Cornwerd) in Friesland. It is cited by Boeles, p. 510. Traces of the mounting are clearly visible in the photograph.

⁸³ The photograph seems to show traces of a loop mounting.

⁸⁴ This piece is double struck. See note 85.

⁸⁵ Monneret De Villard, p. 35, lists five coins of Heraclius and Heraclius Constantine from the collection in Budapest marked **BOXX**. He gives their weights as 3.647, 3.684, 3.689, 3.675, and 3.727 grammes. These pieces are probably included in the seven from Budapest listed in the Catalogue (Coins nos. 122, 127, 128, 130, 139, 141, and 142). See Coin no. 176 for another piece from the fourth *officina*.

⁸⁶ Philip Grierson, "A Byzantine Hoard from North Africa," *Numismatic Chronicle*, Series 6, XIII (1950), pp. 147–148. This coin was bought by Grierson in Paris with a group of solidi from Carthage of Maurice, Phocas, and Heraclius. All of them were probably part of a single hoard. This particular coin has been analyzed by the specific gravity technique by Grierson, and the results are reported in Chapter II. This is the only instance of this exergual mark during the entire reign of Heraclius.

⁸⁷ See note 85.

⁸⁸ The Wilton Cross, which forms the setting for this coin, is discussed by T. D. Kendrick, "St. Cuthbert's Pectoral Cross, and the Wilton and Ixworth Crosses," *The Antiquaries Journal*, XVII (1937), pp. 283–293, and esp. pp. 289–290. A fuller discussion of this find and the literature relating to it is to be found in Chapter III.

⁸⁹ L. Huszár, "Das Münzmaterial in den Funden der Völkerwanderungszeit im mittleren Donaubecken," *Acta Archaeologica Academiae Scientiarum Hungaricae*, V (1955), p. 97, No. CCIV. The coin was identified on the basis of an accurate description in the original notes of Csallány. Cf. D. Csallány, "Byzantine Money in Avar Finds," *Acta Archaeologica Academiae Scientiarum Hungaricae*, II (1952), p. 239. It was found in 1934.

⁹⁰ BMC, *Byz.*, I, p. 187, No. 25. This piece is also cited by Tolstoi, p. 657. It is from the same set of dies as the next one.

⁹¹ A photograph of the cast of this coin was very kindly furnished by Dr. Erxleben, who noted the fact that it had been a part of the Meynaerts Collection. See the discussion of the Mons hoard in Chapter III. Also see the preceding note.

⁹² See the discussion of the Mons hoard in Chapter III. This coin may have been a part of that hoard.

⁹³ Cf. J. Dirks, "Trésor de Wieuwerd. Ornaments et monnaies mérovingiennes et byzantines en or," *Revue de la numismatique belge*, XXII (1867), p. 160, and Dr. S. Janssen, "Der merovingische Goldschmuck aus Wieuwerd," *Jahrbücher des Vereins von Alterthumsfreunden im Rheinlande (Bonner Jahrbücher)*, Heft XLIII (1867), pp. 71–72. This coin has a loop attached, so the weight would be of little value. Dirks seems to indicate a weight 3.88 grammes. Dr. Janssen, however, described the coin as being of only twenty-two carat gold fineness. The pressure of striking has forced a part of the reverse legend to be impressed completely through the coin while a part of the obverse inscription has been obliterated. This coin and Coin no. 118 were part of the hoard of gold coins and ornaments found at Wieuwerd in Frisia. Both pieces are listed by Boeles, p. 510. The photographs of this piece and Coin no. 118 included in the plates are apparently larger than life size.

⁹⁴ This is probably the same coin as that for which Monneret De Villard, p. 35, gives a weight of 3.74 grammes.

⁹⁵ This coin is pierced with two holes.

⁹⁶ This coin is pierced.

⁹⁷ This coin is pierced and worn.

⁹⁸ This coin was formerly in the Tolstoi Collection, and Tolstoi gives a weight of 3.7 grammes for it. Tolstoi, pp. 657–658, No. 169. He suggests *ad loc.* that all of the coins of this type, i.e. those on which the bust of Heraclius Constantine is smaller than that of Heraclius, were struck in the period 613/14–630. See note 76. In 613/14 the young Heraclius Constantine was elevated to Augustus,

and in 630 he reached his majority. His bust was then depicted as equal in size to that of his father. Tolstoi also claims that this piece was struck in Constantinople. See note 99.

⁹⁹ This coin shows a die identity of the reverse with Coin no. 148.

¹⁰⁰ Dr. P. C. J. A. Boeles, "Merovingische Munten van het Type Dronrijp en de Vondst van Nietap," extract from *Gedenkboek A. E. Van Giffen een Kwart Eeuw Oudheidkundig Bodemonderzoek in Nederland* (Meppel: J. A. Boom & Zoon, 1947), p. 12. This coin was found at Nietap, southwest of the city of Groningen in the province of Drenthe. Boeles gives the inscription on the obverse as /// **ERACR(?)VIS** /// and on the reverse as **VICTORIA AV4I**, but the photograph supports the reading given above.

¹⁰¹ Sabatier, I, p. 274. A line drawing of this coin is to be found in Sabatier, *Iconographie d'une collection choisie de cinq milles médailles romaines, byzantines et celtibériennes* (St. Petersburg, 1847), pl. X, 5.

¹⁰² *Collection Ernst Fürst zu Windisch-Grätz beschreiben von Theodor Rohde* (Wien, 1904), VII, pt. 3, p. 17. A reference to the preceding coin is made in connection with this one, but the reverse inscription is different. Monneret De Villard, p. 35, gives the weight.

¹⁰³ Werner, p. 118. This coin was found in a grave at Sinzig, in the district of Ahrweiler. Werner suggested that it was struck in Constantinople between 613/14–630. He listed it as in the Museum für Vor- und Frühgeschichte in Berlin, I, i, 1448. It is mounted.

¹⁰⁴ *Idem.* This coin was found in a grave at Wonsheim, in the district of Alzey. The weight is of little value because the coin is mounted in a ring and the edge has been tooled. Werner suggested that the coin was struck in Constantinople between 613/14–630. At the time that he wrote, the piece was in the museum at Worms. The mark in the exergue is unusual during the joint reign of Heraclius and Heraclius Constantine, but it is similar to the coins struck during the sole reign of Heraclius or during the period when he ruled with his two sons.

¹⁰⁵ *Idem.* This coin was found in a grave at Pfahlheim, in the district of Ellwangen. Werner suggests that it was struck in Constantinople between 613/14–630 or somewhat later. It has been badly clipped and is mounted in a ring. The weight of the piece is, therefore, of little value. Werner lists it as in the Germanische Nationalische Museum, Nürnberg, 1149.

¹⁰⁶ Monneret De Villard, p. 35, cites this coin as in Graz. Luschin von Ebengreuth, p. 37, also cites this coin as in the Landesmuseum Joanneum in Graz, but inquiries reveal that the piece is no longer there. In describing the piece Luschin von Ebengreuth says, "Ein Fehlschlag der die Rückseite mit **BOXX** auf einer Seite erhaben, auf der anderen vertieft zeigt."

¹⁰⁷ Monneret De Villard, p. 35, lists this coin as in Berlin, but inquiries reveal that it is no longer there. Luschin von Ebengreuth, p. 36, lists this piece as pierced.

¹⁰⁸ Monneret De Villard, p. 35.

¹⁰⁹ Stefan, pp. 55–56, mentions this coin as being derived from an Alemannic funerary deposit in South Germany and gives the weight as 4.002 grammes. The mark in the exergue is given by Stefan as **XDOX**, but it is clear from the photograph in the sale catalogue that the form given above is the correct one. Stefan identified the piece as a Germanic barbarian imitation of the light weight solidi issued by Heraclius and Heraclius Constantine. The incompre-

hensible character of the inscriptions on this coin would seem to show that the die engraver was illiterate, and any conclusions based upon the legends would be open to grave doubts. It is only because of the mark in the reverse exergue that Stefan can even suggest that this piece is an imitation of the light weight solidi.

¹¹⁰ Tolstoi, p. 707, No. 422, cites this coin and gives its weight as 3.75 grammes. Wroth (BMC, *Byz.*, II, p. 189) dates these coins as *ca.* 629/30 and later, noting that "The long beard and moustache worn by Heraclius on these coins first appears on dated $\mathcal{A}\mathcal{E}$ of the year 20 (= A.D. 629/30). The issue of these gold coins may, therefore, have begun in that year. At Ravenna a similar group of three occurs on the M coins, A.D. 631/2 to 639/40. On the bronze M coins of Constantinople the group of Heraclius, Heraclius Constantine and Heracleonas is found in the year 30, i.e. 639/40 (Cp. Pernice, *L'Imperatore Eraclio*, pp. 294, 295)." See note 114.

¹¹¹ This piece was purchased in 1913 in the village of Zhabotino in the Oblast of Kiev. It is pierced.

¹¹² Unfortunately the Poltava Museum of Regional Studies was burned by the Germans during the course of World War II, and all of the inventory records were lost. It is therefore impossible to say whether any of these light weight solidi in that museum were in the hoards from Pereschtschepino or Novo-Sandsheroovo. The probability is very strong that all four of the light weight solidi from the Poltava Museum were found in those two hoards. This coin is pierced twice. The obverse of this piece is derived from the same die as the next coin.

¹¹³ See note 112. This coin is pierced twice.

¹¹⁴ Tolstoi, p. 707, No. 423, cites this piece. He holds that neither this nor the piece listed as Coin no. 160 were struck in Constantinople. He also notes that copper coins of the same type with the mark of the mint of Ravenna dating from the twenty-second year of the reign (631/2) are known. In addition coins of a different type with half-length portraits of Heraclius with his two sons were struck in Rome beginning with the thirteenth year of the reign (622/3). Tolstoi suggests that these solidi with three figures were struck in 631/2 when Heraclionas was sixteen years old. The weight of this specimen is of no value because the coin has been pierced. Tolstoi, however, gives the weight as 3.4 grammes. Bauer, pp. 227-229, reported that Zograph had seen a hoard of coins that had been found with other utensils in the Dnieper Delta, and that all of the coins of the three emperor type were marked **BOXX**. See Chapter III on this hoard and the hoard from Pereschtschepino which contained solidi of the same type.

¹¹⁵ Bauer, pp. 227-229, says that eight solidi marked this way in the exergue were found in the hoard from Pereschtschepino. All were from a single pair of dies. See Chapter III on this hoard.

¹¹⁶ See note 112. This coin is derived from the same set of dies as the next piece. Wroth (BMC, *Byz.*, I, p. 255, note 1) dates the solidi of Constans II on the basis of the bronze issues. "The gold and silver cannot be dated with perfect exactness. The principal clues are the first appearance of Constantine IV and of Heraclius and Tiberius in company with their father, probably in A.D. 654 and 659 respectively. The dates assigned to the AV with the *single* bust of Constans are more conjectural. The beardless head doubtless begins in A.D. 641,

when the Emperor was only eleven. In a few years (about 646?) his face displays a close beard and whiskers. Then follows the long beard type, the first appearance of which may be assigned to A.D. 651/2, as in that year Constans is represented with a long beard on the dated \mathcal{A} of Constantinople. At this time he was only about twenty-one years old, and the portrait is obviously entirely conventional and closely modelled upon that of Heraclius. The Athens (Asklepieion) finds (see Svoronos, *Journ. int.*, 1904, p. 143), which may have been buried *circ.* 662, the date of the visit of Constans to Athens, include the solidi of the Emperor in conjunction with his three sons (two types)."

¹¹⁷ See the preceding note. This coin has probably been clipped, and it shows definite signs of having been mounted. Its weight is therefore of no metrological significance.

¹¹⁸ This coin has two very small punch holes.

¹¹⁹ This coin is fixed to the handle of a vessel.

¹²⁰ This coin was purchased in 1916. It shows a die identity of the reverse with the next piece.

¹²¹ See the preceding note.

¹²² The sale catalogue lists this specimen as *fleur de coin*.

¹²³ The same coin was also in Hirsch Sale XXXI, 6 May 1912, 2172. This coin has been pierced, and the weight would therefore be of little value.

¹²⁴ This coin was formerly in the Tolstoi Collection. Tolstoi had purchased it in Italy, and he gave its weight as 4.45 grammes. Tolstoi, p. 736, No. 60.

¹²⁵ This coin was at one time mounted, and it has been cut down in size, so that the weight is of little value. Grierson analyzed this coin by the specific gravity technique, and the results are reported in Chapter II. It must date from 659 A.D. or later because Heraclius was made Caesar in 654 and Tiberius was elevated to the same rank in 659. The hoard from Pereschtschepino yielded sixteen coins of Constans II marked **OBXX**, and a similar find of light weight solidi of Constans II was made at Novo-Sandsherovo (Zatschepilovo) in the Government of Poltawa in 1928. Bauer, pp. 227-229. See Chapter III on these hoards. See Coin no. 128 for another piece from the fourth *officina*.

¹²⁶ Tolstoi, p. 800, No. 15, cites this coin and gives its weight as 3.6 grammes. Wroth (BMC, *Byz.*, II, p. 313), places these coins under the years 668-669. Constantine IV supposedly acquired the nickname Pogonatus from the fact that though he was beardless when he left Constantinople to avenge the murder of his father, by the time that he returned he had grown a beard. These coins which portray him as beardless must therefore be early in the reign. See *Ibid.*, I, p. xxix. This coin is pierced.

¹²⁷ This coin was formerly in the Tolstoi Collection. It was bought by Tolstoi in St. Petersburg, and he gives its weight as 3.75 grammes. Tolstoi, p. 802, No. 32. Wroth (BMC, *Byz.*, II, p. 314), lists coins of this type for the period 670-680 A.D. In answer to the extraordinary demand of the Anatolian forces, Constantine IV had associated his younger brother with him on the throne. The troops had demanded that since they were true believers in the Trinity they should be ruled by a trinity of emperors. About 680, however, Constantine IV deposed his younger brothers from this imperial dignity. Thus the presence of the beard on the Emperor places this coin after 669 A.D. while the presence of the two younger brothers necessitates a date anterior to 680 A.D.

Wroth, *op. cit.*, I, p. xxx, suggests that the attitude of the Anatolian soldiery may throw some light "on the feeling that inspired the frequent representation in Imperial coinage of groups of *three* (e.g. Heraclius and family and later Emperors)." This coin is pierced.

¹²⁸ These coins are authentic Byzantine issues of western origin. They are not of the light weight series, but they are included in this appendix to the catalogue because of the peculiar mark in the exergue.

¹²⁹ Wroth (BMC, *Byz.*, I, p. 155, No. 276) gives the weight as 62.3 grains. Wroth attributed this coin to the mint of Ravenna. The long cross in the right hand of the Victory on the reverse has the form of a crozier. This coin is also cited by Tolstoi, p. 515, No. 32.

PLATES

I



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III



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NUMISMATIC NOTES AND MONOGRAPHS

No. 139

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THE COINAGE OF THE TULŪNIDS

By OLEG GRABAR



THE AMERICAN NUMISMATIC SOCIETY
NEW YORK

1957

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The Coinage of the Ṭulūnids

By OLEG GRABAR



THE AMERICAN NUMISMATIC SOCIETY
NEW YORK

1957

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FOREWORD

In the first half of the ninth century the Muslim empire of the 'Abbāsids was both politically and culturally at the pinnacle of its power and creativity. With the exception of the far west the whole area conquered in the seventh and eighth centuries was controlled by the caliphs in Iraq, while the artistic activity of Samarra together with the religious and philosophical ferment in Baghdad and elsewhere testify to the profound spiritual vitality of the time. The second half of the century witnessed, on the other hand, a definite decadence in the political structure of the empire, which paved the way for the collapse of caliphal authority a century later. One of the signs of this decadence was the appearance in various parts of the empire of local dynasties which usurped to a greater or lesser degree the sovereignty of the caliphs. Among these dynasties one of the best known was that of the Ṭulūnids of Egypt (868–905) which brought to Egypt a prosperity which the land of the Nile had not known for several centuries and which prepared the way for the brilliant later civilizations of the Fāṭimids and the Mamlūks. Among the many signs of the bounty of the time was the coinage established by the founder of the dynasty, which, according to mediaeval chroniclers, acquired an almost proverbial value. It is to this coinage and to the historical conclusions which can be drawn from it that this study is devoted.

My thanks are due to T. V. Buttrey, Jr., in charge of the Yale University Collection, and to Dr. H. W. Glidden for permission to publish coins in their collections and for providing me with photographs; to the American Numismatic Society for awarding me a fellowship during the summer of

1951 and for putting at my disposal the facilities of their library and collection; to the Department of Near Eastern Studies at the University of Michigan for allowing me to go to New York and complete this study; to Dr. John Walker for information about a coin in the British Museum; to Dr. A. S. Ehrenkreutz for reading my manuscript and making suggestions; and especially to Dr. G. C. Miles for constant help.

ABBREVIATIONS

ANS: American Numismatic Society.

Becker: C. H. Becker, "Die Stellung der Ṭūlūniden," in *Beiträge zur Geschichte Ägyptens unter dem Islam*, Strassburg, 1902-3.

B.M.: S. Lane-Poole, *Catalogue of Oriental Coins in the British Museum*, London, 1875-1889.

Casanova: P. Casanova, *Inventaire sommaire de la collection de S.A. la Princesse Ismail*, Paris, 1896.

Constantinople: I. Ghalib, *Meskūkrāt qadīmah Islāmiyah Qatālōghi*, vol. II, Constantinople, 1312/1894.

Hassan: Zaky M. Hassan, *Les Tulunides*, Paris, 1933.

ibn al-Athīr: ibn al-Athīr, *al-Kāmil*, Cairo ed., 1353 A.H.

Ibn Saʿīd: ibn Saʿīd, *Fragmente aus dem Mughrib*, ed. K. Vollers in *Semitische Studien*, I, Berlin, 1894.

Jerusalem, *Flagellation*: P. Lemaire, "Muhammedan Coins in the Convent of the Flagellation, Jerusalem," *Numismatic Chronicle*, 5th series, vol. XVIII, 1938.

Johnston, N.C.: J. M. C. Johnston, "Mohammedan Coins," *Numismatic Chronicle*, 3rd series, vol. XIX, 1899.

Khedivial: S. Lane-Poole, *Catalogue of Arabic Coins in the Khedivial Library*, London, 1897.

al-Kindi: al-Kindi, *Governors and Judges of Egypt*, ed. Rh. Guest, London, 1912.

Lane-Poole, Johnston: S. Lane-Poole, "Mr. J. M. C. Johnston's Cabinet," *Numismatic Chronicle*, 3rd series, vol. XII, 1892.

Maqrīzi: Maqrīzi, *Khīṭaṭ*, Cairo, 1270 A.H.; also G. Wiet's ed. in *MIFAO*, especially vols. XXX (1911) and LIII (1927).

Markoff: A. K. Markoff, *Inventarnyi Katalog Musulmanskih Monet*, St. Petersburg, 1896.

MCIA: *Matériaux pour un Corpus Inscriptionum Arabicarum*.

- MIFAO: Mémoires de l'Institut Français d'Archéologie Orientale au Caire.*
- Miles, *Tarsus*: G. C. Miles, "Islamic coins from the Tarsus Excavations of 1935-37," *The Aegean and the Near East, Studies presented to Hetty Goldman* (New York, 1956), pp. 297-312.
- Paris: H. Lavoix, *Catalogue des Monnaies Musulmanes de la Bibliothèque Nationale*, Paris, 1887-96.
- N.Z.: Numismatische Zeitschrift.*
- Porter, *Numismatic Chronicle* 1921: H. Porter, "Unpublished Coins of the Caliphate," *Numismatic Chronicle*, 5th series, vol. III (1921).
- Répertoire*: E. Combe, J. Sauvaget, G. Wiet, *Répertoire chronologique d'épigraphie arabe*, Cairo, 1931 and ff.
- RJC*: G. C. Miles, *Rare Islamic Coins*, New York, 1950.
- R.N.*, 1935: R. Cottevieille-Giraudet, "La Collection Decourdemanche II," *Revue Numismatique*, 4ème série, vol. XXXVIII, 1935.
- RNB: Revue de Numismatique Belge.*
- Rogers: E. T. Rogers, *The Coins of the Ṭūlūni Dynasty*, in *The International Numismata Orientalia*, part IV, London, 1877.
- Soret, *RNB*, 1854 and 1856: F. Soret, "Lettre à M. Lelewel," *RNB*, 2ème série, vol. IV, 1854; "Lettre à M. le Conseiller d'Etat de Dorn," *ibid.*, 1856.
- Sumer* III: N. Nakshabandi, "al-Dīnar al-Islāmi," *Sumer*, III (1947).
- Ṭabari: al-Ṭabari, *Annales*, ed. M. de Goeje and others, Leyden, 1879-1901.
- Taghribirdi: abū al-Maḥāsīn Yūsuf ibn Taghribirdi, *al-Nujūm al-Zāhirah*, Cairo, 1929.
- Tiesenhausen: W. Tiesenhausen, *Monety Vostochnago Khalifata*, St. Petersburg, 1873.
- UM: University Museum, Philadelphia.
- Zambaur: E. de Zambaur, "Contributions à la Numismatique Orientale," *Numismatische Zeitschrift*, vols. XXXVI and XXXVII, 1904 and 1905.
- Z. für N.: Zeitschrift für Numismatik.*

THE COINAGE OF THE ṬULŪNIDS

Some years ago the coin collection of Yacoub Artin Pasha, acquired by Robert C. H. Brock and presented by him to the University Museum in Philadelphia (hereafter U.M.), was transferred on indefinite loan to the American Numismatic Society. Dr. G. C. Miles has already devoted a monograph to Fāṭimid coinage and an article to Umayyad and 'Abbāsīd dinars,¹ both of which were based in large part on the University Museum collection. Furthermore he has included some of the more outstanding specimens in his *Rare Islamic Coins*.²

This study of the coins of the Ṭulūnid dynasty in Egypt was similarly originally based on the collection of the University Museum (35 coins, all gold), to which were added the 18 specimens of the American Numismatic Society. There is, although it is now almost eighty years old, a corpus of Ṭulūnid coins made by E. T. Rogers in 1877, which included at least 15 coins which were to become part of the Pennsylvania collection.³ Rogers knew of 125 coins which he attributed to the Ṭulūnids, and divided them into 58 types, a type being defined on the basis of mint, date, and other characteristics. A thorough search through publications since Rogers' time has led me to count almost 600 Ṭulūnid coins known in all, falling into 97 types based on differences in metal, date, mint, and inscription.⁴ There is

¹ G. C. Miles, *Fāṭimid Coins* (New York, 1951), and "Some Early Arab Dinars," *The American Numismatic Society Museum Notes*, III (1948).

² G. C. Miles, *Rare Islamic Coins* (New York, 1950); hereafter *RIC*.

³ E. T. Rogers, *The Coins of the Ṭulūni Dynasty*, in *The International Numismata Orientalia*, Part IV (London, 1877).

⁴ This result would not have been possible without the remarkably careful bibliographical notations kept by Dr. Miles, whom I want to thank

then some justification in assuming that a new publication of existing Ṭulūnid coins is not out of place, since it will bring together documents which are only too often scattered in dozens of periodicals. Moreover, Rogers' publication is purely analytical, giving only bare epigraphical and metrologic information. In fact one of the essential aims of numismatic studies is to provide the historian with documents which must be correlated with other sources. In Roman and Byzantine history, the works of A. Alföldi, C. H. V. Sutherland, M. Grant, and many others, and in Islamic history, the older works of Max van Berchem and recent studies by G. C. Miles, J. Walker, and others, have shown the extraordinary wealth of numismatic evidence for the understanding of civilization and history. In the specific case of the Ṭulūnids a number of problems of great significance for the history of the 'Abbāsīd caliphate are posed and the coinage may perhaps be used to solve some of them.

The first part of this study will be devoted to a catalogue of the coins known to me which can be assigned without doubt to the Ṭulūnids; that is, those coins bearing the name of a member of the Ṭulūnid family.¹ Only different types of coins will be described, but in each case the number of known coins will be indicated. They can all be found in the appended bibliography. The metrologic information (weight in grams, diameter in millimeters) has been, whenever possible, based

for the free use of his cards. It must also be added that most of these coins belong to European and American collections. Near Eastern collections are still too little known, but publications—even incomplete ones—such as that of the Khidr Ilyās treasure (N. al-Naqshabandi, "Kanz Khidr Ilyās," *Sumer*, X (1954), pp. 180ff.) show that a great number of numismatic documents are still untouched in the private and public collections throughout the Near East.

¹ On the problem of defining a coin as belonging to this or that dynasty, see the remarks of G. C. Miles, in *The Numismatic History of Rayy* (New York, 1938), p. 110.

on the coins of the ANS and of the University Museum in Philadelphia. Otherwise it has been copied from whatever publication has first dealt with a coin. Only one set of metrologic characteristics is given whenever all coins whose weight and diameter are known are quite similar to each other in this respect. Any variation which may be of interest to the economic or political historian has been included, wherever it occurs. Since, on the whole, Ṭulūnid coins follow the pattern of the classical 'Abbāsid type in appearance and in epigraphy, full description will be given only once. It is assumed that, unless specifically noted, each coin follows the pattern of the one preceding it. Whenever possible, a bibliographical reference has been given for each coin in one of the two standard and most complete catalogues (British Museum, Paris).¹ Unpublished or rare issues are marked with an asterisk(*), illustrated specimens with a dagger(†).

The second part will include discussions of a series of problems posed either by the coinage itself or by the history of the dynasty, for which coins may provide an answer. A detailed history of the Ṭulūnid dynasty has not been included, since it is easily available in the *Encyclopedia of Islam*,² in G. Wiet's contribution to Hanotaux' *Histoire de la Nation Egyptienne*, and especially in Zaky Hassan's *Les Tulunides* and Carl Becker's superb evaluation of Egypt in Ṭulūnid times in his *Beiträge zur Geschichte Ägyptens*.³ Most

¹ S. Lane-Poole, *Catalogue of Oriental Coins in the British Museum*, 10 vols. (London, 1875-1889); H. Lavoix, *Catalogue des Monnaies Musulmanes de la Bibliothèque Nationale: III Egypte et Syrie* (Paris, 1896). These two catalogues will be abbreviated as *B. M.*, and Paris respectively.

² See also Zaky Hassan's article "Aḥmad ibn Ṭulūn," in the new edition of the *Encyclopedia of Islam*.

³ G. Wiet, *L'Égypte Arabe*, vol. IV of G. Hanotaux' *Histoire de la Nation Egyptienne* (Paris, 1937); Zaky M. Hassan, *Les Tulunides* (Paris, 1933); C. H. Becker, „Die Stellung der Tuluniden," *Beiträge zur Geschichte Ägyptens unter dem Islam* (Strassburg, 1902-3). Among the sources I have

of these studies have in fact used numismatic evidence, especially for establishing dates. But the historical problem of the Ṭulūnids is a much wider one.

It is often said that Aḥmad ibn Ṭulūn became virtually independent, and his status is compared to that of the Ṭāhirids in Persia or to that of the Aghlabids in Ifrīqiyah.¹ But it may be questioned whether the notion of independence is not in many ways ambiguous when applied in contemporary terms to what has been recently called "the Muslim City."²

The intrinsic theoretical unity of the Muslim world, *dār al-Islām*, has often been emphasized.³ But it is equally well known that, in practice, the middle of the third century A. H. saw the first breaking up of the physical unity of the Muslim empire. Together with it, or somewhat later, there appeared also, at the head of the "politico-religious unity" characteristic of Islam,⁴ a breakdown of the unity of command with the multiplication of *amīrs* and later, *sultāns*, who first in fact and then also in right shared with the Commander of the Faithful the leadership, actually even the sovereignty, of the Islamic community. Islam underwent a practical breakup of its theoretical structure both in the center of the caliphate and in the provinces which made up the empire.⁵ A study of the Ṭulūnids can only concern itself with the latter phenomenon, but the Egyptian dynasty is

been unable to consult al-Balawi, *Sīrah Aḥmad ibn Ṭulūn*, ed. M. Kurd 'Alī (Damascus, 1358 A. H.).

¹ Wiet, p. 86; Becker, p. 150, where it is suggested that the similarity was not only one of situation, but also one of the means used to achieve the same results.

² L. Gardet, *La Cité Musulmane* (Paris, 1954).

³ Gardet, pp. 23 ff.

⁴ Ibid., p. 25.

⁵ On all these problems the latest study is that of E. Tyan, *Institutions du Droit Public Musulman: I Le Califat* (Paris, 1954), especially pp. 513 ff.

particularly important in this process of disintegration. Its early date is significant in the sense that it was the first true dynasty to develop within the Arab core of the Islamic empire and that, therefore, it created a precedent for all later developments. Furthermore, the personalities of the men who were involved in the Ṭūlūnid adventure (especially Aḥmad ibn Ṭūlūn and al-Muwaffaq) were such that through them one can get a glimpse of the ideology and of the motivations which led them to do and to say what they did and said.

The problem is not so much one of establishing facts as of determining in what ways the political *morcellement* of the empire was reconciled in men's minds with the theoretical unity of Islam. In other words, how did the Ṭūlūnids (or any other third century A. H. dynasty) explain their own position in regard to the caliphate? The problem is not academic, for it is only through a study of each individual dynasty of the ninth, tenth, and eleventh centuries that one can properly understand the later formalization of a new Muslim concept of sovereignty and of a new political and social situation after the arrival of the Seljuqs, when mediaeval Islam was transformed.¹ For the early period we do not possess a systematic treatise such as that of al-Māwardī or an analysis of the contemporary situation such as al-Ghazzālī's. Nor are the individual stories found among chroniclers always sufficient to suggest a clear picture of the situation.² The epigraphical material, however, spotty as it may be, and in particular coins, whose date and minting place are generally known, can be of great interest. On the one hand, this material, in most cases, is rigorously contemporary with the event with which it was connected; and, on the other hand,

¹ Cf., for instance, H. A. R. Gibb, "An Interpretation of Islamic History II," *The Muslim World*, XLV (1955), pp. 124 ff.

² This difficulty has already been pointed out by Tyan, pp. X-XI.

it is not a mere recording, but a definite expression of power and sovereignty.¹ This study will attempt to determine, on the basis of coinage, inscriptions, and texts, the nature of the Ṭulūnids' power in Egypt in relation to the caliphate and in what ways their power was similar to or dissimilar from the contemporary sovereignty of Aghlabid and Ṭāhirid princes.² Such an analysis is particularly justified in the case of the Ṭulūnids, since, as will be shown, Aḥmad ibn Ṭulūn for one was very careful throughout his life to have his acts sanctioned by religious authorities.³ It will be attempted to show that this was not a purely formal habit and that the life and utterances of ibn Ṭulūn indicate a high degree of religious consciousness in all of his activities. But, even

¹ On coinage as a prerogative of the prince see, among others, Tyan, pp. 480ff; on inscriptions remarks are scattered throughout the numerous books and articles of Max van Berchem, in particular in his volumes of the *Matériaux pour un Corpus Inscriptionum Arabicarum*.

² One should note that coinage or, in a more general way epigraphy, is not the only non-literary source which can be used to clarify the political and ideological relationship of various dynasties to the caliphate. Others are, for instance, clothes and arms. These are comparatively well known and accessible as far as the Mameluk period is concerned, after the studies of L. A. Mayer and D. S. Rice. But, so far as the earlier period is concerned, only a very careful combing of the sources could lead to the establishment of a consistent order among the numerous "robes of honor." Cf. some preliminary remarks in Tyan, pp. 488ff., especially p. 496, where, of course, only caliphal dresses and *insignia* are mentioned. The essential point is that, when the literary sources are few or unreliable, and even when they are abundant, the mediaeval Islamic world has left us an enormous body of material which, following Sauvaget, one may call "archaeological," and which supplements, when it does not actually supersede many a literary document. Cf. J. Sauvaget, *Introduction à l'histoire de l'Orient Musulman* (Paris, 1946), pp. 48ff.

³ For example ibn Sa'id, *Fragmente aus dem Mughrib*, ed. K. Vollers in *Semitische Studien*, I (Berlin, 1894), pp. 69-70; al-Kindi, *Governors and Judges of Egypt*, ed. Rh. Guest (London, 1912), p. 226. Hassan, *Les Tulunides*, p. 82, notices this tendency in ibn Ṭulūn to look for a religious justification of his acts, but he does not explain it entirely.

without this indication, it could be argued that his acts and decisions had in some way or other to be adapted to the politico-religious thinking of the time. Even if they were not always in accord with the *general* consensus of theological opinion, they must have been agreeable to a certain *fraction* of the religious community and, therefore, must have reflected a definite religious and ideological trend of the time. Thus, insofar as it is based on official epigraphical material, this study will not concern itself primarily with the political, economic, social, or military aspects of Ṭūlūnid history, which have been well analyzed by C. Becker, G. Wiet, Z. Hassan, and others (unless the coinage can lead us to new conclusions), but with the ideological or theoretical frame within which this history took place.

This evaluation of Ṭūlūnid coinage as a political and historical document falls under two headings: the coinage of Aḥmad ibn Ṭūlūn and the coinage of Khumārawayh ibn Aḥmad. In the case of the latter, only the coinage of the first few years of his rule is of any significance. Late Ṭūlūnid coinage is of little interest and serves only as a useful contemporary milestone for dates which are otherwise clearly established through texts.

PART I:

NO.	METAL	DATE	MINT	DIAMETER	WEIGHT	NO. OF SPEC.
I	Æ	258	Miṣr			3
†2	Æ	25[9?]	Miṣr	19	2.24	4
†3	A	266	Miṣr	23.1	4.22	13
4	A	267	Miṣr	22.1	4.12	20
5	Æ	267	Miṣr	24	2.45	2
6	A	267	al-Rāfiqah	21	3.70	4
†*7	Æ	267	al-Rāfiqah	25	2.91	1
8	A	268	Miṣr	23 24	4.21 4.15	14
*9	Æ	268	al-Rāfiqah			1

CATALOGUE

REFERENCE	REMARKS
Rogers, nos. 1 and 2	<p><i>Obv.</i> لا اله الا الله وحده لا شريك له</p> <p><i>Rev.</i> الله محمد رسول الله · ٥ ·</p> <p><i>Obv.</i> margin: ornament. <i>Rev.</i> margin: بسم الله ضرب هذا الفلس بمصر سنة ثمان وخسين و مائتين</p>
<i>RIC</i> , nos. 392-3	For both 1 and 2 see commentary pp. 30ff.
ANS, UM Rogers, nos. 9-10 <i>B.M.</i> , II, no. 218	<p><i>Obv.</i> — — — <i>Rev.</i> — — —</p> <p>المعتمد على الله احمد بن طولون المفوض الى الله</p> <p>Usual margins: Qur'ān, XXX, 3-4, and IX, 33; mint and date.</p>
UM (2) <i>B.M.</i> , II, no. 219	
Paris, III, no. 13 Rogers, no. 17	
Rogers, no. 16 Paris, III, no. 1	
Yale University	
ANS UM <i>B.M.</i> , IX, no. 219b	
Jerusalem, Flagellation	No description given.

NO.	METAL	DATE	MINT	DIAMETER	WEIGHT	NO. OF SPEC.
10	A	268	al-Rāfiqah		3.30	1
11	A	268	al-Rāfiqah	23.2	3.81	5
†12	A	269	Miṣr	22.9	4.05	12
*13	A	269	Dimishq			1
†14	A	270	Miṣr	22	4.15	27
15	A	270	al-Rāfiqah		3.50	1
16	AR	270	Dimishq	21	2.60	1
17	Æ	bef. 270				1
18	Æ	bef. 270				5

REFERENCE	REMARKS
Paris, III, no. 2	Note the low weight, below pp. 58-9.
Rogers, nos. 18-19	Rev. — — — احمد بن طولون لؤلؤ
UM	No لؤلؤ
Rogers, nos. 20-21	
B.M., II, no. 220	
American University of Beirut	I have not seen this coin. Infor- mation G. C. Miles.
ANS, UM	The weight of these coins varies between 4. and 4.25. See p. 68.
Rogers, nos. 22-24	
B.M., IX, no. 220b	
Rogers, no. 26 (Paris, III, no. 3)	Note the low weight.
Paris, III, no. 12	
Zambaur, <i>Contrib. I</i> , pp. 74ff.	No mint. No date. Rev. احمد بن طولون ◊
Miles, <i>Tarsus</i> , p. 301.	Obv. — — — Rev. احمد بن المعتمد على الله طولون ◊ (?) On rev. traces of marginal legend including المؤمنين. ¹

¹ There is little doubt that nos. 17 and 18 belong to the same series. They are separated here only because in detail there occur a few minor discrepancies between the Tarsus coins and the specimen published by Zambaur. Cf. below pp. 30ff.

NO.	METAL	DATE	MINT	DIAMETER	WEIGHT	NO. OF SPEC.
19	A	270	al-Rāfiqah		3.58	1
†20	A	271	Miṣr	22.1	4.13	12
21	A	272	Miṣr	21.5 21	4.12 4.13	19
*22	A	272	al-Rāfiqah		2.58	2
23	Æ	272	Dimishq	25	2.80	1
†24	A	273	Miṣr	21.9 22	4.06 4.20	27
25	A	273	al-Rāfiqah	22.8	4.10 3.38	7
26	A	274	Miṣr	22.9 22.9	4.17 3.94	19
†*27	A	274	al-Rāfiqah	23.5	3.96	2
28	A	274	Ḥimṣ		3.60	1

REFERENCE	REMARKS
Paris, III, no. 19	<i>Obv.</i> — — — <i>Rev.</i> — — — المفوض الى الله المعتمد على الله خارويه بن احمد
UM	
Rogers, no. 27	
UM	
ANS	
Rogers, nos. 30-31	
<i>B.M.</i> , IX, no. 220t	
Markoff, <i>add.</i> , p. 928, no. 7c	Not described.
<i>R.N.</i> (1935), p. 34	Note the extraordinary weight.
Paris, III, no. 32	<i>Rev.</i> pellet.
UM	
ANS	
Rogers, nos. 35-37	Rogers, no. 35, weighs only 3.95.
<i>B.M.</i> , II, no. 221	
Rogers, nos. 32-33	
<i>B.M.</i> , II, no. 222	All coins, except Rogers no. 32
Paris, III, no. 20	(<i>B.M.</i> , II, no. 222) and
	<i>Khedivial</i> , no. 910, whose
	weight is known, weigh around
	3.50.
UM (2)	
Rogers, nos. 39-41	
<i>B.M.</i> , IX, no. 222c	
ANS	
Rogers, no. 42	The second coin (<i>R.N.</i> , 1935,
(Paris, III, no. 17)	p. 35) weighs even less (3.62).
	Note weight.

NO.	METAL	DATE	MINT	DIAMETER	WEIGHT	NO. OF SPEC.
29	A	275	Miṣr	22.8	3.95	7
30	A	275	al-Rāfiqah		3.50	3
31	Æ	275	Dimishq		2.90	1
32	A	276	Miṣr	22.8	4.05	8
33	A	276	al-Rāfiqah	20 25.3	3.82 3.36 3.12	4
34	Æ	276	Dimishq	23.7	2.55	1
35	A	276	Ḥarrān	25.4	4.16	2
36	A	276	Anṭākiyah		4.10	1
37	A	277	Miṣr	22.5 22.9	4.14 4.10	25
†*38	A	277	al-Rāfiqah	19	4.60	1
39	A	277	Dimishq	23	4.15	3

REFERENCE	REMARKS
UM Rogers, no. 44 Paris, III, no. 27	Square piercing. The Paris coin weighs 4.30.
Rogers, no. 45 Paris, III, no. 27	Note weight.
Paris, III, no. 35	
UM Rogers, nos. 47-48 Paris, III, no. 28	
Rogers, no. 49 Rogers, no. 50 Paris, III, no. 22	Rogers, no. 49 is the same as <i>B.M.</i> , II, no. 23. Note the very low weight.
Rogers, no. 52	
Rogers, no. 51 <i>Khedivial</i> , no. 914	The Cairo coin (apparently the same as in <i>Sumer</i> , III, p. 277) is remarkable for its small size (19.).
Paris, III, no. 15	Obv. — — — Rev. — — —
ANS UM Rogers, nos. 53-55 Paris, III, no. 29	No marks.
ANS Rogers, no. 56 <i>B.M.</i> , II, no. 224	Note the unusual weight and size.

NO.	METAL	DATE	MINT	DIAMETER	WEIGHT	NO. OF SPEC.
40	A'	277	Filastīn		3.20	2
*41	A'	277	Anṭākiyah			1
42	A'	278	Miṣr	22.5	4.10	21
43	A'	278	al-Rāfiqah	24	3.60	3
44	A'	278	al-Rāfiqah			2
†*45	A'	278	al-Rāfiqah	23	3.70	1
*46	A'	278	Ḥimṣ			1
47	A'	278	Filastīn		4.20	4
48	A'	278	Anṭākiyah	25.1	3.54	1
†*49	A'	278	Anṭākiyah	23	3.21	1
50	Æ	2xx	Dimishq	25.1	2.82	1

REFERENCE	REMARKS
Paris, III, no. 23	Note weight.
Private collection (Casablanca)	Communication G. C. Miles.
UM B.M., IX, no. 224c Rogers, nos. 57-8	
Rogers, nos. 59-60	
Rogers, no. 61	Rev. — — — ع
ANS	Floral tail to the <i>nūn</i> of <i>bn</i> .
Constantinople, II, no. 798	No marks.
Paris, III, no. 24	
Rogers, no. 62	Obv.: ornamental tails on و and ى of المفوض الى الله; pellet between them. Rev.: to the side of area: الملك
ANS	Obv.: normal inscription, but different style of epi- graphy. Rev.: — — — س
Rogers, no. 63	Since the reverse bears the name of al-Mu'tamid and the obverse that of al-Mufawwad, this coin could not be later than the beginning of 279.

NO.	METAL	DATE	MINT	DIAMETER	WEIGHT	NO. OF SPEC.
*51	Æ					1
†*52	A	279	Miṣr	22.3 22	4.25 4.25	2
53	A	279	Anṭākiyah		4.35	1
54	A	279	Dimishq	21.8	4.14	1
55	A	279	Miṣr		4.10	14 ¹
56	A	279	al-Rāfiqah			1
†*57	A	279	Ḥalab	19	3.25	1
58	A	279	Anṭākiyah		4.30 3.83	2
59	Æ	279				31

¹ Are included here 8 coins from the Khidr Iliyās treasure, some of which could conceivably belong to type 52.

REFERENCE	REMARKS
Soret, <i>RNB</i> (1854), p. 18	<i>Obv.</i> — — — <i>Rev.</i> — — — المعتد على الله احمد بن خارويه يعقوب
UM	Cf. below p. 77
ANS	<i>Obv.</i> — — — <i>Rev.</i> — — — المعتد بالله المعتد على الله خارويه بن احمد
Paris, III, no. 16	Note weight.
Iraq Museum, no. 3878 (<i>Sumer</i> , III, p. 277).	
Rogers, nos. 64-65	<i>Obv.:</i> — — — <i>Rev.:</i> — — —
Paris, III, no. 31	No name. المعتد بالله خارويه بن احمد
Rogers, no. 66	This coin was published by Soret (<i>RNB</i> , 1856, p. 132) as having on the obverse خارويه and on the reverse المعتد بن احمد بالله. Rogers corrected it to fit with the common type 55.
H. W. Glidden coll.	
Rogers, nos. 67-68	Cf. 53. Rogers, no. 67 is supposed to be in Paris, but does not agree with Paris, III, no. 16.
Miles, <i>Tarsus</i> , p. 302	<i>Obv.</i> <i>Rev.</i>
ANS	لا اله الا مما امر به الله محمد الامير محمد رسول الله بن موسى فرد
	Cf. below p. 33.

NO.	METAL	DATE	MINT	DIAMETER	WEIGHT	NO. OF SPEC.
60	A'	280	Miṣr		3.80	1
61	A'	280	Miṣr		4.20	1
†62	A'	280	Miṣr	22.9	4.09	8
63	A'	281	Miṣr	21.9	4.02	10
64	A'	281	Dimishq		4.40	1
65	A'	281	Filastīn			1
66	A'	281	Ḥalab	21.9	4.12	4
67	A'	282	Miṣr	22	4.08	15
68	Æ	282	Miṣr		3.	2
†*69	A'	282	Filastīn	20	4.03	1
†70	A'	283	Miṣr	22.7	4.22	21

REFERENCE	REMARKS
Paris, III, no. 32	<i>Obv.</i> — — — <i>Rev.</i> — — — pellet ح
Rogers, no. 69	<i>Obv.</i> — — — <i>Rev.</i> : no sign. pellet
UM Rogers, nos. 70–72 <i>B.M.</i> , IX, no. 224h	<i>Obv.</i> — — <i>Rev.</i> — — — pellet ح
UM Rogers, nos. 73–75 <i>B.M.</i> , IX, no. 224k	Pierced.
Paris, III, no. 18	
<i>Z. für N.</i> , XI, p. 64	Not described.
Rogers, no. 76	<i>Obv.</i> : no pellet. <i>Rev.</i> — — — ط
UM Rogers, nos. 77–78 <i>B.M.</i> , II, no. 225	Like 62. Note that the mint in Rogers no. 78 is not certain. Cf. Tiesenhausen in <i>RNB</i> , vol. XXXI, p. 360.
Rogers, no. 79 Paris, III, no. 36	No pellet, no. ح.
ANS	
UM Rogers, nos. 80–85 <i>B.M.</i> , II, no. 226	<i>Rev.</i> — — — جيش بن خاويه ح Note that one coin, <i>Khedivial</i> , no. 924, has the very low weight of 3.18.

NO.	METAL	DATE	MINT	DIAMETER	WEIGHT	NO. OF SPEC.
71	A'	283	Miṣr	20	3.90 3.83	3
†72	A'	284	Miṣr	22.2 22.8	4.10 4.09	12
73	A'	284	Dimishq			2
74	A'	285	Miṣr	21 22.1	3.65 4.16	18
†*75	A'	285	Ḥimṣ	21.8	4.07	2
76	A'	285	Filastīn	22	4.29	4
77	A'	285	Ḥalab	22.6	3.97	1
78	A'	286	Miṣr	21	3.73	7
79	A'	286	Miṣr		4.	1
†80	A'	287	Miṣr	21.9 21.9 21.9	4.10 4.14 4.	4

REFERENCE	REMARKS
Rogers, no. 86 <i>Khedivial</i> , no. 925	<i>Rev.</i> — — — هرون بن خاويه ح
UM ANS Rogers, nos. 87-91 <i>B.M.</i> , II, no. 227	Note the comparatively low weight of these Miṣr coins. No pellet, no ح.
<i>B.M.</i> , IX, no. 227b	No weight given. Four rings.
UM ANS Rogers, nos. 92-95 Paris, III, no. 40	No rings. As 72. The ANS weight is exceptional. All other weights known to me are below 3.80.
ANS	
UM Rogers, no. 96-97 <i>B.M.</i> , II, no. 228	The coin from the Rogers collection weighs only 3.75.
Rogers, no. 97	
UM <i>B.M.</i> , IX, no. 228c	Ringed.
Rogers, no. 98 (Paris, III, no. 41)	<i>Rev.</i> — — — ح
UM UM ANS Rogers, no. 102	Nothing below area on rev. or obv.

NO.	METAL	DATE	MINT	DIAMETER	WEIGHT	NO. OF SPEC.
†81	A'	287	Miṣr	22	4.14	25 ¹
82	A'	287	Dimishq			2
*83	A'	287	Filastīn			1
84	A'	288	Miṣr	21 21	3.96 4.15	23
85	A'	289	Miṣr	23.4	4.08	1
86	A'	289	Miṣr		4.15	1
87	A'	289	Miṣr	22 22.3	4.04 4.	20 ²
88	A'	289	Miṣr			1
†*89	A'	28x	Ḥalab	21.1	4.03	1

¹ Undescribed coins have been included here, although a number could presumably belong to the preceding type.

² Some of these coins, which are not described, could equally well belong to any of the four 289 types.

NO.	METAL	DATE	MINT	DIAMETER	WEIGHT	NO. OF SPEC.
†90	A'	290	Miṣr	21.9	4.02	12
91	A'	290	Miṣr	22		1
92	A'	290	Dimishq			2
93	A'	290	Filastīn	22.5	3.43	1
†94	A'	291	Miṣr	21.9	3.82	23
95	AR	291	Miṣr			1
†*96	A'	291	Filastīn	22	3.63	2
97	A'	292	Miṣr	23.4	3.88	1

REFERENCE	REMARKS
UM Rogers, nos. 114-17 <i>B.M.</i> , IX, no. 229e	Like 87.
Constantinople, no. 799	— on obv. only.
Zambaur, <i>Contrib. I</i> , no. 71	No signs.
Rogers, no. 113 <i>Khedivial</i> , no. 933	Note low weight.
UM Rogers, nos. 118-23 <i>B.M.</i> , II, no. 230	Obv. — — — No sign on rev. The UM coin is lower in weight than most of the other coins whose weight is known (4.10-4.20).
Lane-Poole, Johnston, p. 57 UM	No description given. Pierced. Note that there are already 'Abbāsīd coins struck in Filastīn in 291 (Zambaur in <i>N.Z.</i> , 1922, p. 9). Note also the weight.
<i>B.M.</i> , IX, no. 230c	Like 94. Note that there are already 'Abbāsīd coins struck in Miṣr in 292 (Rogers, nos. 124-5). The <i>B.M.</i> coin belongs to what must have been the last Ṭulūnid issue.

PART II: COMMENTARY

1. *Aḥmad ibn Ṭulūn and early Ṭulūnid coinage*

According to the mediaeval chroniclers, Aḥmad ibn Ṭulūn, after some thirty-five years spent either as a student at Tarsus or as an officer in Samarra—where his life was largely devoid of the usual more or less criminal intrigues which characterized the ‘Abbāsid court after the death of al-Mutawakkil—was given his first appointment in Egypt in 254 A.H./868 A.D. Al-Ṭabari simply says that in that year Bayākbāk, or Bākbāk, the apanagist of Egypt and Aḥmad’s stepfather, “entrusted (*‘aqada*) Aḥmad ibn Ṭulūn with the governorship of Miṣr.”¹ Maqrīzi and ibn Sa‘īd, who repeat the contemporary account of ibn al-Dāyah and whose reliability as far as Egypt under ibn Ṭulūn is concerned is greater than al-Ṭabari’s, are more specific. According to them, Aḥmad ibn Ṭulūn was appointed as the agent of Bayākbāk in Egypt (*fī khilāfatihī ‘ala Miṣr*) and in fact his appointment was only over the main part of the province, *al-qaṣbah*, to the exclusion of the regions which depended from it, such as Alexandria, etc.² For sixteen years thereafter, until his death in 270 A.H./884 A.D., Aḥmad ibn Ṭulūn remained in Egypt. But the nature of his power there did not remain the same throughout these years.

¹ Ṭabari, *Annales*, ed. M. de Goeje and others (Leyden, 1879–1901), III, 1697.

² Ibn Sa‘īd, p. 7. Maqrīzi, *Khitaṭ* (Cairo, 1270 A.H.), I, 314; in G. Wiet’s edition, in *Mémoires de l’Institut Français d’Archéologie Orientale*, vol. 53 (Cairo, 1927), pp. 144 ff.; translation by P. Casanova, in *MIFAO*, vol. II (Cairo, 1906), p. 208. On the exact meaning of the word *qaṣbah*, cf. Becker, p. 160, “nicht die Hauptstadt, sondern das Hauptland im Gegensatz zu den See- und Grenzprovinzen.” On the whole system of lieutenants in the provinces cf. Makrīzi, Wiet ed., pp. 145–6.

The second stage in Aḥmad ibn Ṭulūn's rule over Egypt began in 257 A.H., when Yārjūkh, the new apānagist of Egypt and Aḥmad's father-in-law, gave him control over Alexandria and Barqah.¹ But the major new event occurred in 258. In that year Aḥmad received control over the finances of Egypt, after the removal of his rival ibn al-Mudabbir, and also the governorship (*wilāyah*) of the Syrian marshes.² And ibn Sa'īd adds that the letter of appointment which was brought to ibn Ṭulūn by a personal servant, *khādim*, of the caliph al-Mu'tamid, was witnessed by two respected judges, one from Wāsiṭ, the other one from the marshes.³ The fact itself and the station of the people involved would further enhance the suggestion made above that, in all his dealings with the caliphate, Aḥmad ibn Ṭulūn was always careful to receive the approbation of the religious leaders of Islam.

In the same year, 258/871-2 Yārjūkh died and Ja'far ibn al-Mu'tamid, later called al-Mufawwaḍ ila Allāh, became

¹ Ibn Sa'īd, p. 11; al-Kindi, p. 216.

² Ibn Sa'īd, pp. 16-17; al-Kindi, p. 217. There is a curious discrepancy between al-Kindi's statement that Aḥmad had received the governorship of the marshes and ibn al-Dāyah's that it was only the financial control. Al-Kindi's statement appears more convincing, since it is followed by a relation of the difficulties found by ibn Ṭulūn in getting a representative in Tarsus, whose functions were to be political. It should also be noted that ibn al-Dāyah was more interested in anecdotes and that his facts (or is it ibn Sa'īd's relation of them?) are not always too precise; cf. Becker, p. 152. Whatever happened, whether Aḥmad's control was purely political or financial, or both, it is an odd assignment if one considers that he did not control Syria at the time. It can only be properly understood if one admits that the war against the infidels was one of the foremost aims in ibn Ṭulūn's mind, as is suggested by a number of sources, ibn al-Athīr, *al-Kāmil* (Cairo, 1353 A.H.), VI, pp. 14-5 and ibn al-Maḥāsin Yūsuf ibn Taghribirdi, *al-Nujūm al-Zāhirah* (Cairo, 1929), III, p. 5.

³ It may be noted in passing that the latter was Sāliḥ ibn Aḥmad ibn Ḥanbal, the well-known son of the founder of the fourth major Sunni school of theology. Cf. a few words on him in H. Laoust, art. "Aḥmad ibn Ḥanbal," in the new edition of the *Encyclopedia of Islam*.

heir to the caliphate.¹ Some sources assert that it is soon after that, in 259, that Aḥmad ibn Ṭulūn became independent, while others have even believed him to have been so as early as 258. But the literary evidence does not give any information to suggest any difference in Aḥmad's status between 258 and 259; and the two late texts (ibn Khaldūn and ibn Taghribirdi) which do speak of independence are contradicted either by earlier documents or by their own further accounts.²

At the same time, 258 is the date which is usually taken to have witnessed the first appearance of Ṭulūnid coinage. In 1854 and 1856 F. Soret published two copper coins, dated in 258, struck in Miṣr, and bearing in the lower part of the reverse the sign ۱۵۱۱, which was interpreted by Soret to mean Aḥmad.³ The reading is, of course, unacceptable, but these two coins have been taken by Rogers as nos. 1 and 2 of his classification of Ṭulūnid coins. In 1904, E. de Zambaur published a coin with the same sign at the bottom of the reverse, but without any trace of mint or date. Over the

¹ Cf. the discussion in Hassan, pp. 51-2. Some sources claim that in that year Ja'far was made overlord of all the western provinces. Cf. below pp. 42 ff.

² Ibn Khaldūn, *Ibar* (Cairo, 1284), IV, 298. See also ibn al-Athīr, V, p. 367 and Taghribirdi, III, p. 6, where ibn Ṭulūn is made independent at the death of Bākbāk, which is contradicted by all the other sources and by Taghribirdi himself, who writes, p. 7, that ibn Ṭulūn did not control the finances as yet. Rogers, p. 6, claims that, at the death of Yārjūkh, ibn Ṭulūn became independent by succeeding to all of the latter's functions. This is not brought out by the sources.

³ F. Soret, "Lettre à M. Lelewel . . .," *Revue de Numismatique Belge*, X (1854), p. 20; and "Lettre à M. le Conseiller d'Etat de Dorn," *ibid.*, XII (1856), p. 132. Pl. II, fig. 11 (a drawing), in the latter of these works, shows the name Aḥmad more clearly than on the other coin. I believe, however, that we are dealing with the very same motive and that the difference is due to the state of the coin or to a defective die. Cf. also Paris, III, no. 14, where the same mistake is repeated.

sign appears the name Aḥmad ibn Ṭulūn, while on the obverse the first part of the profession of faith is followed by the name of the caliph al-Mu'tamid 'ala Allāh.¹ But the two Soret coins did not bear the name of the Commander of the Faithful. Zambaur assumed this sign to be a date, 262, but in a second article² he seems to have accepted Nützel's suggestion that it is a mere ornament. In 1950, George C. Miles published two similar coins bearing the probable date of 259,³ while the collection of the American Numismatic Society contains a number of other coppers of the same type. Five specimens of a similar variety were discovered by the American excavators at Tarsus.⁴ The question is whether these coins all belong to one group and whether they should all be considered as Ṭulūnid, bearing in mind that the problem is further complicated by the fact that, with an exception to be mentioned presently, no other copper coin is known until the rule of Khumārawayh, twelve years later.

A first point to be made is to compare the evidence of the *fals* with that of the other coins from Miṣr. Egyptian gold and silver issues are known for almost the whole period between 255 and 267.⁵ All these issues, except one, are purely

¹ E. de Zambaur, "Contributions à la Numismatique Orientale I," *Numismatische Zeitschrift*, XXXVI (1904), pp. 74ff.

² "Contributions à la Numismatique Orientale II," *ibid.*, XXXVII (1905), pp. 194-5.

³ *RIC*, nos. 392-3.

⁴ Miles, *Tarsus*, pp. 297ff.

⁵ 255: *RIC*, no. 150; 256: no known coin; 257: *RIC*, nos. 152-3; 258: Paris, I, no. 1020 and *RIC*, nos. 154-5 (on these see below pp. 38-9); 259: Rogers, no. 4, *Khedivial*, no. 616, Markoff, p. 345, no. 1; 260: Rogers, nos. 5 and 6, *UM*, etc. . . .; 261: *Khedivial*, no. 619 (there is a problem connected with this coin, cf. below p. 32); 262: no known coin; 263: Rogers, no. 7 and 8, Markoff, p. 345, no. 2, *Khedivial*, no. 618; 264: Markoff, *add.*, p. 928, no. 2a, *Z. für N.* (A. Erman, „Die im Jahre 1882 . . . erworbene . . . Münzen," *Zeitschrift für Numismatik*, XI, 1884), p. 64 (neither of these coins is described); 265: *RIC*, no. 291.

‘Abbāsid, without any mention of Aḥmad ibn Ṭulūn. The 265 coin in the ANS, the only *dirhem* of the whole group, is of particular importance, since it suggests that the two undescribed ones of 264 were also purely ‘Abbāsid. But, among these coins, one issue poses a problem and it is noteworthy that it is the 258 issue, i.e., the issue which is contemporary with the major group of problematic copper coins. Five of these coins are known to me: one in the Bibliothèque Nationale,¹ two in the University Museum collection,² one in the National Library (ex-Khedivial) in Cairo,³ and one in a group of coins published by Rogers in 1875.⁴ All these coins, the only ones known for Miṣr in 258 (with the exception discussed in note 3), have on the reverse, under the name of the caliph, at the place where one generally finds the name of the governor, a word (?) which so far has not been identified (PLATE III). But there is no doubt that it cannot be Aḥmad ibn Ṭulūn. In other words for the year 258 (and perhaps 259 also as far as the copper coins are concerned) we deal with a body of gold and copper coins with a strange sign on the reverse and no obvious Ṭulūnid name.

The second remark which can be made is based on a comparatively recent archaeological discovery. Among the coins found by the Tarsus excavators, we meet not only with the

¹ Paris, I, no. 1020.

² *RIC*, nos. 154–5.

³ *Khedivial*, no. 619. This is actually a problematic coin. The mint has been obliterated. The date 261 seems to be certain. It would be tempting to attribute this coin to Miṣr, since it is only on Egyptian coins that we meet with the odd signs described below. On the other hand, the numerous coins known between 258 and 261 do not possess the sign, and one might wonder why it suddenly reappeared. Properly speaking this coin does not belong to the group of 258 coins. It is simply mentioned here, because it may eventually be of use in finding the solution to the problem of this whole group of coins.

⁴ E. T. Rogers, "Notice on the dinars of the Abbaside dynasty," *Journal of the Royal Asiatic Society*, n.s., VII (1875), p. 283.

five previously mentioned coins with the name of Aḥmad ibn Ṭūlūn, but also with 27 specimens of a copper type which bears on the reverse the name of Muḥammad ibn Mūsa.¹ Similar coins were already known in Paris² and by Soret.³ G. C. Miles has argued that Muḥammad ibn Mūsa was in fact a nephew of ibn Ṭūlūn, who, under Khumārawayh, governed Tarsus for a short time in 279/892–3,⁴ and that this whole group of coins should be assigned to the *thughūr al-sha'miyah*, which, from 258, were under the theoretical control of the Ṭūlūnids. This argument is most plausible and the typological similarity of the Zambaur coin to this later group added to the facts that it is epigraphically notably different from the 258 coins and that a number of specimens of the same type were found at Tarsus would indeed suggest that all the coppers bearing the name of Aḥmad ibn Ṭūlūn should then be connected with the *thughūr*. It is, of course, impossible to determine the date of these coins with any certainty. But since the dated Miṣr specimens do not bear any proper name, and in particular not the name of ibn Ṭūlūn, it is doubtful whether the Zambaur and Tarsus coins should be considered as contemporary with them. A date after 265, that is after Aḥmad's triumphal expedition through Syria, is perhaps more likely,⁵ inasmuch as this date would correspond with the first issues of coins in Miṣr with the name of the Ṭūlūnid prince.

In other words the copper coins bearing the name of a Ṭūlūnid should be attributed to the Syrian marshes and are

¹ Miles, *Tarsus*, p. 302. In this catalogue, no. 59.

² Paris, I, no. 1666.

³ In *RNB*, 1854, p. 22.

⁴ Hassan, p. 122.

⁵ There had been a Ṭūlūnid governor in Tarsus before 266, al-Kindi, p. 217, and, considering the shaky nature of Aḥmad's control over the *thughūr*, the name of the governor was more likely to have been used before 266 than ibn Ṭūlūn's.

probably to be dated after 265, while the coins struck in Miṣr in 258 and 259 do not have any Ṭulūnid name. The only point of contact between the two groups of coins is that on both the sign $\text{||}\diamond\text{||}$ occurs and the question which arises is, of course, the origin of that sign. Chronologically the Egyptian samples should be considered as the first to have used this sign, but did the sign originate in Egypt? To my knowledge there is no similar decorative motive in Islamic coinage, either before or after the Ṭulūnid period. A heraldic sign or some symbol of Central Asian Turkish origin seems very unlikely for so early a period. But, if one considers that this type of copper coin was most common in the *thughūr* area, it may be suggested that the sign was an imitation of one of the marks of value, monograms, letters, or counter-marks on Byzantine coins.¹ Although such adaptations of non-Islamic, particularly Byzantine, types are well known at various times throughout Islamic numismatic history,² this explanation cannot be, for the time being, more than a simple suggestion. It may perhaps be strengthened somewhat by the fact that Aḥmad ibn Ṭulūn spent many years in Tarsus, studying with the many learned men who were there and participating in the constant Holy War which was waged at the frontier.³ It is because of this attachment

¹ W. Wroth, *Catalogue of the Imperial Byzantine Coins in the British Museum* (London, 1908), II, pp. 661–3 for a list of such marks; pls. XLV, 11–12, LI, 4–7 for marks of the ninth century, which could have been copied and simplified by the Muslims.

² Cf. especially the Umayyad period and later, the Urtuqid and Seljuq periods in Asia Minor. It may be noted that some of the coins found by the Tarsus expedition show as early as in the end of the third century A. H. features derived from local traditions, Miles, *Tarsus*, pp. 310–11.

³ Ibn Hawqal, *Kitāb, ṣūrah al-arḍ*, ed. J. H. Kramers in *Bibliotheca Geographorum Arabicorum*, vol. II (2nd ed., Leyden, 1939), pp. 183–4. Ibn al-Jawzi, *al-Muntaẓam* (Hayderabad, 1357), vol. V, part 2, pp. 71–74, also emphasizes that Aḥmad was interested in religious matters and that he went to Tarsus in order to fight the infidels.

to Tarsus and to the idea of the war against the Byzantines that he received the financial and political control of *thughūr* before acquiring Syria. In the little-known early *ghāzi* milieu of Tarsus, Byzantine objects and coins must have been quite common; and it is possible that attempts were made then to copy or transform Byzantine symbols, just as the latter certainly were taken over a few centuries later when the Danishmend and Ortoqid cultures developed in another area, but in the same relationship to the Christian civilization of Anatolia. It is quite possible that ibn Ṭulūn had seen some such Byzantine type, and then adapted it to Egyptian copper coins, since there is no reason to doubt his genuine concern for the *jihād* against the infidels, which he wanted to undertake as an *amīr* rather than as an individual soldier of fortune.¹

At the same time it must be emphasized that, whether one considers the motive of the diamond and three bars as an imitation from Byzantium or as a mere decoration, the copper coinage on which it appears in no way reflects the position of Aḥmad ibn Ṭulūn *vis-à-vis* the caliphate. If it were not for the Zambaur and Tarsus coins which bear the sign and the name of the prince, there would not be any justification in considering the coins as Ṭulūnid. Even then, these copper coins, which can by analogy be associated with the *person* of ibn Ṭulūn, can in no way be taken as evidence of his office, much less so of his independence from the caliphate. In a strict sense, whatever power Aḥmad ibn Ṭulūn may have acquired in 258, it was not considered by him, or by the caliphate, as a type of appointment which permitted him to add his own name to that of the caliph on the coinage of the province of which he was vice-governor and financial director. In that sense his position was definite-

¹ Ibn al-Athīr, VI, pp. 14-15. For more on the Holy War and ibn Ṭulūn, see below.

ly different and lower than that of the numerous governors who, before him, had put their names below the names of the caliph on the coins issued in their capitals.¹

This still formally subservient position of Aḥmad ibn Ṭulūn is further confirmed by the fact that the known *ṭirāz* inscriptions from Egypt dated in 260, 262, and 263² do not mention the name of the then governor of Egypt. Yet the letter of appointment which was sent by al-Mu'tamid in 258 did mention *ṭirāz* together with finances, although the text is admittedly quite vague.³ A third series of more or less contemporary documents is provided by a weight and a stamp recently published by M. Jungfleisch.⁴ The stamp is dated 260 and mentions neither the name of the caliph nor of the Ṭulūnid. The weight is dated 259 and does bear the name of Aḥmad ibn Ṭulūn, called there *mawla amīr al-mu'minīn*.⁵ The formula used on these two objects, as has been pointed out by M. Jungfleisch, is interesting in that it used the full expression *bism Allāh al-raḥmān al-raḥīm*, which is only known on two objects from the times of al-Wāthiq and al-Mutawakkil and which had been abandoned by ibn Ṭulūn's immediate predecessors. These two objects seem to confirm the evidence of the coins: in 259 we meet with the name of the Ṭulūnid on an official object, just as he is indirectly suggested on the copper coins, but, in both

¹ Cf., for instance, *B.M.*, I, index of names and *passim*. There is a basic difference between the coins which bear the name of a governor after *mimmā amara* and those which have merely a name under the mention of the caliph. In the first case we are dealing with the expression of a direct executive order or of an official prerogative. The second type reflects rather the actual importance of the governor of a certain province, without necessarily implying the same specific prerogative of striking coins.

² *Répertoire*, II, nos. 646, 656, 667.

³ Ibn Sa'īd, p. 16.

⁴ M. Jungfleisch, "Un poids et une estampille en verre," *Bulletin de l'Institut d'Égypte*, XXX (1949), pp. 4 ff.

⁵ On this formula see below p. 39 note 5.

cases, we are dealing with a practice which was common to many governors who have never been suspected of trying to become independent. One may call this "routine" procedure, except for the fact that the usage of a less typical formula on glass (a formula, it may be noted, which is characterized by the completeness of its divine invocation) and of a mysterious sign on coinage does indeed suggest that we are dealing with a rather extraordinary man. At the same time, the glass inscription, like the gold coins between 259 and 265 and the *tirāz* formulas which belong to the usual 'Abbāsīd type, does not mention the name of the governor.¹

Thus, in dealing with this group of Egyptian documents between the years 254 and 265, we are led to the conclusion that there is only one piece of evidence which definitely and unequivocally mentions the name of Aḥmad ibn Ṭūlūn: the 259 weight. The coincidence of a curious sign on a group of coins of 258 and 259 with the appointment, known through texts, of ibn Ṭūlūn to the control of the finances and of the administration of Egypt and its similarity to the sign on a coin from a different area suggests, without proving, that the copper coins could be considered as Ṭūlūnid. But in none of these cases do we meet with any indication that the *de facto* ruler of Egypt considered himself independent from the caliphate. If it had not been for what followed, these documents, or the corresponding literary texts, would not have warranted any extensive study. As it is, however, when connected with the texts, they do offer a great deal of interest in illustrating two important points in any explanation of ibn Ṭūlūn's career: his concern for the absolute

¹ To deduce from that that "c'est bien en 260 H. qu'il faut dater la première indépendance de l'Egypte en période d'Islam" (Jungfleisch, p. 8), seems to me farfetched. These were years when ibn Ṭūlūn's hands were full with the pacification of Egypt and there is no valid indication that there occurred any change in the status he had in 258.

legality of his acts towards the caliphate,¹ and a strange interest in the activities of the Byzantino-Arab frontier.² His actions seem meant to appear as conforming to the dictates of Islamic legal and political theory. It must be recalled that the first part of the third century A.H. was one of the most flourishing ones in the development of Islamic civilization, but one that is especially characterized by the activities of the great traditionists and codifiers of Islamic law. Practically alone among the Turkish officers, whose scandals fill the political chronicle of Iraq, Aḥmad ibn Ṭulūn takes some part in the religious life of the time and withdraws to the frontier with its *ribāṭs* and its *ghāzis* without taking his family along.³ It would not seem consequent then to suggest that his life of earnest retirement was followed by a sudden and intense involvement in intrigues which would ultimately make him independent, and put him in a position contrary to the very nature of Islamic political theory. That he did intrigue to achieve his aims is amply proved by the texts: it was the only means to achieve any result. But to attribute to him an aim to match his means is not to do justice to his past; and such an interpretation is certainly not justified by the contemporary and official documents of the time—as opposed to the later texts, which, influenced as they were by the later developments of Islamic history, tended to simplify earlier events. And it will be attempted to show that these very same religious and legal concerns directed ibn Ṭulūn's later actions.

We must, however, first turn to one unsolved problem of the coinage of the time, the problem of the five gold coins of 258. These, it will be remembered, are perfectly normal 'Abbāsid coins, except for the fact that on the fifth line of

¹ Cf. also ibn Sa'īd's description, p. 16, of the reasons for which he demanded the control over finances; Hassan, p. 51.

² See below.

³ Hassan, pp. 30–31.

the reverse area we meet with a word which has not, so far, been understood [PLATE III]. It has been read as *Najrān* or *Bahrayn*, the latter being properly discarded by G. C. Miles,¹ since Miṣr appears as a mint on other coins of the same type, and since this would have been a most unusual place for the mint name at the time. The position of the word would almost require that it be a name, presumably the name of the governor responsible for the mint. But the possible names of Yārjūkh, the absentee lord of Egypt in 258, ibn Ṭulūn, or Ṭa'laḡ or Ṭughj, who briefly replaced Aḡmad ibn Ṭulūn while the latter went to Alexandria, do not fit the epigraphical data; and I have been unable to find a possible explanation for this word. Could it be a metrological term? Or are we dealing here with some symbol?

The first evidence we possess for a change in ibn Ṭulūn's position occurs in 265. From this year we have two inscriptions. One is on a textile.² It is of the usual type, except for the fact that the praise of the caliph is followed by the words: "this is what the *amīr* has [ordered] to be executed in the public *ṭirāz*, in Miṣr, in the year 265." The name of the *amīr* is not given, but there is little doubt that it is ibn Ṭulūn. The other two *ṭirāz* inscriptions known during his life-time and after 265 are both of the type of the 265 one, not of earlier ones.³ The second inscription of 265 is the well-known one celebrating the foundation of the mosque of ibn Ṭulūn.⁴ In it we meet again with the title of *amīr* and with the expression *mawla amīr al-mu'minīn*,⁵ but the importance

¹ *RIC*, nos. 154-5.

² *Répertoire*, no. 685.

³ *Ibid.*, nos. 699 and 702.

⁴ *Ibid.*, no. 682.

⁵ The question here is to know whether, at this time, the expression *mawla amīr al-mu'minīn* is the statement of a certain personal relation between the two men or whether it is an official title. In a series of passages Max van Berchem has brilliantly shown that all titles in *amīr al-mu'minīn* imply a certain share in the sovereign power of the caliph, a "partage du

pouvoir." See, for instance, *Matériaux pour un Corpus Inscriptionum Arabicarum I Egypte*, in *Mémoires de la Mission Archéologique Française au Caire*, vol. XIX (Cairo, 1903), pp. 81 ff.; or "Eine arabische Inschrift aus dem Ostjordanlandes," *Zeitschrift des Deutschen Palästina Vereins*, XVI (1893). In his commentary on the inscription of the mosque of ibn Ṭulūn, *MCIA*, p. 29, van Berchem assumed that already at that time the expression was a title with the same implication as that found on later inscriptions. At the same time it can be open to doubt whether the formula, when used after the names of governors and financial administrators throughout the Umayyad and 'Abbāsīd periods on stamps and weights, did mean much more than a personal relationship to the caliph. Cf. G. C. Miles, *Early Arabic Glass Weights and Stamps* (New York, 1948), index under *mawla amīr al-mu'minīn*. It seems to me that in the third century A.H. most titles were not yet formalized and that, in the case of Aḥmad ibn Ṭulūn one should still consider the formula as the expression of a personal relationship between the caliph and his subordinate, perhaps a delegation of authority, but certainly not a sharing of it, since the formula was used too often after the name of comparatively minor officials.

The same problem can be raised in the case of the word *amīr*, which refers either to a function or to a title. A. Mez, *The Renaissance of Islam*, Eng. tr. (London, 1937), pp. 81 ff., defines the *amīr* as the military commander, to whom was joined an '*āmil*, whose responsibility it was to deal with financial problems. While perhaps true in the tenth century, this is not so in the case of ibn Ṭulūn. It is clear from al-Ya'qūbi, *Historiae*, ed. T. Houtsma (Leyden, 1883), II, p. 620, that he was the '*āmil* of Miṣr, while ibn al-Mudabbir was controlling the finances. In the examples used by Mez *amīr* refers really to a function. Similarly, when in his letter to al-Muwaffaq (see below p. 45) ibn Ṭulūn refers to the latter as *amīr*, he no doubt meant the function of the caliph's brother as commander of the army, since the latter was only appointed as *wāli al-mashriq* or *wāli al-'ahd* (Ṭābari, III, 1890). Similarly ibn Ṭulūn had been appointed as *wāli* or '*āmil*, not *amīr*. And yet, when on the 259 glass or on the mosque inscription we meet with the expression *al-amīr Aḥmad ibn Ṭulūn*, there is little doubt that a rank or a title are meant as much as a function. There seems to be a distinction, in the third century A.H., between titles which were given and titles which were assumed. Either Aḥmad ibn Ṭulūn liked to be known essentially as a military leader, or we are dealing here with the first steps of a formalization of titles which will be more completely achieved in the following centuries, but the whole question of the development of titles would warrant a more complete study. Cf. just recently A. A. Duri, arts. '*Āmil* and *Amīr* in new ed. of the *Encyclopedia of Islam*.

of the inscription as a document consists essentially in the emphasis given in it to religious themes not usually found in construction inscriptions.¹ Aside from the usual Qur'ānic quotations (II, 256; IX, 18; XXIV, 36–38), we meet with quotations (XLVIII, 29; III, 106) which are less common on building inscriptions and which emphasize the duty of the Muslim against the infidel,² thus pointing once more to the importance given by ibn Ṭulūn to the religious motivations of his acts and to the Holy War. Expressions such as *tasniyah al-dīn* and *'ulḥah al-mu'minīn* within the inscription itself give it an exhortative quality which was common enough on mosque inscriptions but whose emphasis relates it fairly closely to the later Seljuq and Ayyūbid inscriptions, at a time when the main task of the rulers was to restore the spiritual unity of the Islamic community. These two inscriptions are then followed in 266 by the gold coins struck in Miṣr with the name of Aḥmad ibn Ṭulūn under the name of the caliph. It is, therefore, only from that date that one could conceivably speak of Aḥmad ibn Ṭulūn as officially independent from the caliphate. But, even then, two questions are raised by this innovation. First, why 266 and not any other year after 258? And, second, what exactly can be meant by independence in the third century A. H., bearing in mind of course that we are not dealing so much with the *de facto* situation as with the *de jure* one? Is this the same kind of independence as is evidenced in Persia and North Africa at the same time?

The reason for raising the question of the year 266 is that, so far as one can gather from the texts, there was no new

¹ The financial-religious allusions found in this inscription have been fully discussed by G. Wiet, *MCIA I Egypte*, vol. 2 in *MIFAO*, vol. 52 (Cairo, 1930), pp. 80–1.

² For a similar idea expressed through Qur'ānic quotations in the Umayyad period, cf. my forthcoming analysis of the Dome of the Rock in *Ars Orientalis*, vol. III.

appointment given to Aḥmad ibn Ṭulūn in that year. One would have to assume that more or less arbitrarily, in that year, Aḥmad suddenly decided to give an official confirmation to his actual rule over Egypt. However, the events of the preceding three years, that is since 263, together with the events which followed 266, may suggest a more complex explanation for the introduction of the Ṭulūnid's name on the coinage of Egypt, and one that would be more consistent with his political and legal ideas.

In 258, according to Ṭabari, al-Mu'tamid had given his brother al-Muwaffaq the provinces of Diyār Muḍar,¹ Kinnasrīn, and al-ʿAwāsīm.² This tradition is definitely suspect, since it is contradicted by the existence of two coins from al-Rāfiqah (in the Diyār Muḍar) dated in 259 and bearing the name of Ja'far.³ According to ibn-Sa'īd, the whole empire was divided into two parts, the western part being farmed out to Ja'far al-Mufawwad, al-Mu'tamid's son and first in line of succession.⁴ No date is given by ibn-Sa'īd, although a later Egyptian tradition (Taghribirdi) gives the date 256;⁵ but the same event is related by Ṭabari for the year 261.⁶ The coinage of Egypt has the name of Ja'far as early as 258,⁷ and, since the name appears already in 256,⁸ one

¹ Not of Misr, as Hassan writes, p. 52. The error, which consists in the omission of a dot, seems to have already been made by some editors of ibn al-Athīr, V, p. 365.

² Ṭabari, III, pp. 1859–60.

³ Tiesenhausen, no. 1998; H. Nützel, *Katalog der Orientalischen Münzen I* (Berlin, 1898), no. 1553.

⁴ Ibn Sa'īd, p. 19. For another statement without date, see al-Ḥalabi in F. Wüstenfeld, *Die Statthalter von Aegypten zur Zeit der Chalifen* (Göttingen, 1875), III, p. 58.

⁵ Taghribirdi, III, p. 24. But *ibid.*, p. 33, he repeats the same story for the year 261.

⁶ Ṭabari, III, p. 1890.

⁷ Rogers, no. 3.

⁸ B.M., I, no. 358.

might assume that the division was effected as soon as al-Mu'tamid became caliph. On the other hand, the 256 coin is from Baghdad which, according to the texts of the division, belonged to the realm controlled by al-Muwaffaq. Taghribirdi's date is thus certainly wrong, but whether this means that 261 should be accepted as the official date is not entirely certain. The numismatic and *ṭirāz* evidence does confirm the fact of the division,¹ but to my knowledge there is no epigraphical material between the years 256 and 261 which would give us the exact date of the division. In using the name Ja'far on the coins the mintmasters could have referred to the heir apparent to the throne. But at the same time it should be noted that we do not have any textual reference to al-Mu'tamid's heir apparent until 261, in Ṭabari's text, from which it appears that this is the date at which the name al-Mufawwad was given to him. Ṭabari's statement in this respect is confirmed by the coins, and the date 261 seems the most likely one for the division of the empire.² Why then does Ja'far's name appear on coins before 261? It has been suggested by Becker that it is because, at the death of Yārjūkh in 258, Ja'far was probably made successor to all of the latter's functions.³ But while this is possible,⁴ it would

¹ While in the east coins and *ṭirāz* inscriptions mention al-Muwaffaq (*B.M.*, nos. 352, 355, 356; *Répertoire*, no. 753), in the west the name of Ja'far, later under his *laqab* al-Mufawwad ila Allāh, is usual (*B.M.*, I, nos., 353, 358, 366, 374).

² Note the existence of a 261 coin with the name of Ja'far, *B.M.*, I, no. 374, which probably belongs to an early issue of that year. Cf. also Paris, I, nos. 261-2.

³ Becker, pp. 162-3. A tradition existed, Ya'qūbi, II, 624, to the effect that it is the son of al-Muwaffaq, the future caliph al-Mu'taḍid, who took over Yārjūkh's appointment. Becker has shown that this is most unlikely, but the error shows that, even to contemporaries, the events concerning the succession of al-Mu'tamid and the legal rule of the empire were highly confusing.

⁴ Ṭabari, III, p. 1873, mentions the fact that Ja'far attended Yārjūkh's

not explain the existence of coins as early as 256 with the name of Ja'far. One would have to dissociate in Ṭabari's text the two facts of the division of the empire and of the succession to al-Mu'tamid. Ja'far was already heir apparent in 256. In 261 he acquired a *laqab* and was associated with al-Muwaffaq in the rule of the empire, both decisions being strengthened by the sending of the agreement to Makkah, where it was put in the Ka'bah, following probably the precedent of the earlier agreement between al-Amīn and al-Ma'mūn.¹ As far as Egypt is concerned the years 258-261 are characterized by the fact that there was no proper authority replacing Yārjūkh. Ibn Ṭulūn did not receive a new appointment nor did he accomplish any action which would indicate that he considered himself independent, although, of course, there was no one to prevent him from doing what he wanted.

← The situation was regularized in 261 when Aḥmad ibn Ṭulūn's area of influence, Egypt and the *thughūr*, fell to the lot of Ja'far and, while al-Muwaffaq had his hands full in the murderous Zanj war, Egypt, with its wealth and army, was the only remaining force in the empire. The events which followed are well known and can be found in all reference books. Al-Muwaffaq asked for money, *ṭirāz*, slaves, and horses. But at the same time al-Mu'tamid, the caliph, sent a secret message to the effect that al-Muwaffaq's messenger was but a spy sent over to plot against ibn Ṭulūn. The latter kept the messenger under surveillance, but he did make an important contribution for the Zanj war, which, let us note it again, was witnessed officially by various Egyptian military and religious leaders. The sum was thought insufficient by al-Muwaffaq and the insulting man-

funeral. His presence there may perhaps be a sign of his relation to the deceased or to his former positions.

¹ Ibn Sa'īd, p. 19; Ṭabari, III, p. 1890; Maqrīzi, II, p. 178.

ner in which his envoy was received led him to write an injurious letter to ibn Ṭulūn and to remove him from his position. He even levied an army under the command of Mūsa ibn Būghā to move against ibn Ṭulūn. Ibn Ṭulūn also started to build up his defenses, but at the same time he wrote a letter to al-Muwaffaq, the text of which has been preserved by ibn Saʿīd and Maqrīzi, and which is one of the most important documents to explain all further actions of the Egyptian prince, especially if we keep in mind the all-important fact that the caliph himself had advised ibn Ṭulūn against sending help to al-Muwaffaq. The main point of the letter is legal: "he (al-Muwaffaq) has no power over my office; he did not invest me with it. . . . The division [of the empire] was between him and the *amīr* Jaʿfar. The oath of allegiance was sworn to them provided they keep their faith . . . [If not,] the *community* (*al-ummah*) [*may*] *break from him and from [their] oath to him.*"¹ Al-Muwaffaq did try to use force, but his army stopped at Raqqah and it soon disintegrated. The only result was that ibn Ṭulūn lost his official control over the *thughūr*, but here again the reason given by ibn Saʿīd is interesting.² It is that the *thughūr* should be held by "somebody who would be there, who would participate in the *ghazw* with its people, while Aḥmad ibn Ṭulūn had sent somebody who was not doing anything about it." If one recalls the attachment of ibn Ṭulūn to the frontier area, his next move is perfectly understandable. Disregarding his dismissal, which he probably believed had been forced on al-Muʿtamid by his brother, and profiting from the fact that Amajūr, the governor of Syria, had died in 264, he invaded Syria and received the allegiance of the

¹ Ibn Saʿīd, pp. 21 ff., especially p. 22; Maqrīzi, II, p. 179. This letter, which is more clearly preserved in Maqrīzi than in ibn Saʿīd, has been well paraphrased in Hassan, pp. 60–61.

² Ibn Saʿīd, p. 24.

local prefects. But here again, while the possession of Syria is a long-standing economic and strategic necessity for whoever rules Egypt, it should be noted that formally Aḥmad ibn Ṭulūn was only asking for the passage of his army to Tarsus, from where he was planning to start the war against the Christians.¹ Although the Tarsus expedition was only half successful, he intended to stay there;² but the news arrived of his son's revolt in 265. Returning to Egypt in 266, he gathered forces against his son; and in that same year the first coins bearing his name appeared in Fuṣṭāṭ, although no new investment was bestowed on him, nor had he taken any new title for himself.

It has been argued³ that at that time ibn Ṭulūn finally felt that he had reached the pinnacle of his power. But it must be admitted that ibn Ṭulūn had been just as powerful and secure two years earlier when Mūsa ibn Būghā's army

¹ Ibn Saʿīd, p. 55; Kindi, p. 219. In view of the preceding evidence I would be less inclined than Hassan, p. 65, or Becker, p. 178, to be overly suspicious of ibn Ṭulūn's purpose in moving into Syria. The story related by Nuwayri in Hassan, pp. 66–7 and whose text is given in Taco Roorda, *Abul Abbasi Amedis Vita et Res Gestae* (Leyden, 1825), p. 81, shows quite clearly that, although the reception given to ibn Ṭulūn in Tarsus was far from being friendly, he used a trick which must have been heart-breaking for a general (let his forces retreat without fighting in front of the inhabitants of Tarsus) in order to demonstrate to the Byzantines the great strength of the city. Cf. also Masʿūdi, *Les Prairies d'Or*, ed. C. A. Barbier de Meynard and A. Pavet de Courteille (Paris, 1861–77), VIII, p. 67, where the word *ghāzw* is specifically used and where it is added that ibn Ṭulūn's army was followed by volunteers (*muṭawwaʿah*) from Egypt and Syria. Such expeditions were constantly taking place on a smaller scale, sometimes led by ibn Ṭulūn's lieutenants, Ṭabari, III, 1952. All texts on Tarsus are conveniently gathered in H. Grégoire et M. Canard, *La Dynastie Macédonienne*, in A. A. Vasiliev, *Byzance et les Arabes*, II (Bruxelles, 1950), pp. 4–23. But it is only rarely that one can witness an expedition as large as the one set up by ibn Ṭulūn.

² Kindi, p. 220.

³ Hassan, p. 77.

collapsed in Iraq. Furthermore, the example of his own lieutenant Lū'lū', who, in 268, issued coins with his own name in Rāfiqah, shows that it was not necessary to wait until one's power was fully established to start using the privileges of the *sikkah*. Aḥmad's action must, I believe, be explained in terms of his opinion on what was happening in Iraq at the time. His earlier letter had shown that he believed that al-Muwaffaq had usurped a power which did not belong to him and his relations with al-Mu'tamid led him to believe that the caliph felt the same way.

Around 266, Aḥmad went a step further and assumed that the caliph was no longer free of his movements, that he was virtually the prisoner of his brother. The events which followed have been well summarized by Hassan in his history of the Ṭūlūnids:¹ al-Mu'tamid's unsuccessful flight from Iraq; the attempt to establish the caliphate in Egypt; Aḥmad's dismissal by al-Muwaffaq and his replacement by Ishāq ibn Kundāj, the governor of Mosul; his unsuccessful expedition to occupy Mecca; and finally the meeting at Damascus in 269, when the judges and religious leaders of Syria and Egypt were gathered to hear about the tragic state of the caliph and to exclude al-Muwaffaq from the succession to the throne. The meeting in Damascus is the crucial act in ibn Ṭūlūn's activities. He did not try to use religious authority to foster the aims of his own ambition. Rather he tried to persuade the religious authorities of the truth and validity of his own inner conviction that the Commander of the Faithful was a prisoner and that he had to be delivered.² The meeting of 269 was certainly not called on the spur of the moment, but had been brought about by a long series of events which are not always very clear in the

¹ *Ibid.*, pp. 81-4.

² It is on religious grounds that he refused to follow the advice of those who did not deem it wise to fight against al-Muwaffaq, ibn Sa'id, p. 70.

sources.¹ It may be suggested that the appearance of the name of ibn Ṭulūn on the coins of Egypt in 266 can provide us with the date at which the vice-governor of Egypt and director of its finances felt that, since his contacts with the caliphate through proper channels were broken and since the caliph could no longer voice proper authority, he could participate in the official right of *sikkah*. In fact it was his duty to do so.

For this whole development illustrates yet another significant point. In the eleventh-century *al-Aḥkam al-Sulṭāniyah* of al-Māwardi, there is a passage which discusses the case when the freedom of the *imām* is impaired.² Two possibilities exist: either a subordinate of the *imām* takes more power than that to which he is entitled, or the *imām* is the prisoner of a victorious enemy, a polytheist or a rebellious subject. In the first case the procedure is for the *imām* to look for an ally or helper who will put an end to the domination of the usurper; in the second case, the whole community (*ummah*) must try to liberate him, through arms or through ransom. It could be argued that, in the case of the relationship between Aḥmad ibn Ṭulūn and the caliphate, an evolution occurred which corresponds to the two possibilities outlined by al-Māwardi. First, the caliph, feeling that al-Muwaffaq took on too much power,³ appealed to ibn Ṭulūn for help.

¹ Note that ibn Ḥajar al-Asqalāni seems to admit that al-Mu'tamid had sent a letter dismissing al-Muwaffaq from the succession, al-Kindi, p. 512. This statement, which is not confirmed by any other text, is one of many which tends to confuse the exact sequence of events in the five years before 269.

² al-Māwardi, *al-Aḥkam al-Sulṭāniyah*, ed. Maḥmūd Aly Ṣubayḥ (Cairo, no date), p. 18; tr. E. Fagnan (Algiers, 1915), pp. 38-41. Cf. also ibn Khaldūn, *Prolegomènes*, tr. de Slane (Paris, 1863-68), I, p. 394. Al-Māwardi's statement is interpreted in a way similar to ours, but referring to a later period, by H. A. R. Gibb, "Al-Māwardi's theory of the khilāfah," *Islamic Culture*, XI (1937), pp. 297 ff.

³ Note the usage of the word *ghalaba* by Mas'ūdi when talking about al-Muwaffaq, VIII, p. 67.

The second step appears to have been taken by ibn Ṭulūn independently from the caliphate, when he was led to believe—or tried to make others believe¹—that the caliph was a prisoner of his brother. In the first act of the drama, at the time of his letter to al-Muwaffaq, Aḥmad was still considering himself as bound to the agreement which made al-Muwaffaq second in succession to the caliphate. It is only when he thought it incumbent upon himself, as the head of the only sizeable force in Islam outside of al-Muwaffaq's, to move against the latter—or shortly before that—that he felt free to strike coins with his own name below that of the caliph and with the name of the heir apparent and lord of the West, al-Mufawwad, on the obverse. Through his appeal to the *ijmā'* of the religious leaders of the area under his control, through his usage of a procedure which later became part of the textbooks on Islamic law, Aḥmad ibn Ṭulūn also shows that his acts corresponded without doubt to a legal thought which must have been formulated somewhere in his time and which he probably learned during his years at Tarsus. In this sense, it is interesting to compare him to his opponent in Egypt itself, Bakkār ibn Qutaybah, the chief *qāḍi* of Egypt,² who refused to accept the Damascus verdict on the grounds that there was insufficient proof of the plight of al-Mu'tamid and that al-Muwaffaq had not, therefore, forfeited his position.³ Bakkār certainly believed that the preservation of the faith was in a way independent from political contingencies.⁴ Thus, next to ibn Ṭulūn's compara-

¹ The point whether the first or the second of these hypotheses is the correct one is not germane to this study, since it proposes essentially to give the theoretical framework within which ibn Ṭulūn acted. However, in the argument over whether Aḥmad or al-Muwaffaq begun the quarrel between the two men, Hassan appear to me to be right (p. 88) as against Becker (pp. 177–8), in believing that the Iraqi was responsible.

² Cf. the texts and the commentary in Hassan, pp. 87–8 and 260 ff.

³ Kindi, p. 226; cf. also pp. 512 ff., where ibn Ḥajar's stories are given.

⁴ See the story given by Hassan, pp. 87–8.

tive radicalism, there seems to appear in Bakkār that principle of *ḍarūriyah* (necessity) which will be so much more strongly emphasized by al-Māwardi and al-Ghazzālī, several centuries later.¹ It would be interesting to know to what extent and in what ways these two attitudes, this "ambivalence" so characteristic of any living culture,² corresponded to any well-defined position of the religious and legal groups of Islam in the ninth century.

Another question raised at this stage is that of the origins of ibn Ṭulūn's attitude. Does his legal framework reflect that of the early *ghāzi* of Islam? Too little is known about the organization and the life of the frontier in the ninth and tenth centuries A.D., but the previously quoted statement of ibn Hawqal³ suggests that there was an intensive intellectual life there together with the constant warfare.⁴ We may meet in early Islam with a frontier psychology which is perhaps better known in the case of the later Danismends, but which may at that time have been characterized by strict obedience to religious and legal principles.⁵ The literary evidence is not very clear on the question of ibn Ṭulūn's reli-

¹ Gardet, *Cité*, pp. 178ff.

² *Ibid.*, p. 29.

³ Cf. above p. 34, note 3. See also Ṭabari, III, 1930-1, for another personage who settled in a *ribāṭ*; *ibid.*, III, 2193, for a curious system of electing chieftains; also Iṣṭakhri in *Bibl. Geogr. Arab.*, I (Leyden, 1927), p. 55.

⁴ Note that as important a religious leader as the son of ibn Ḥanbal was *qāḍi* in the *thughūr al-sha'miyah*; cf. above p. 29, note 3. Note also that this appears to be the period when certain themes of the "frontier legend" were established; see R. Goossens, "Autour de Digénis Akritas", *Byzantion*, VII (1932), and esp. M. Canard, "Delhemma," *Byzantion*, X (1935), pp. 283-300.

⁵ That the Holy War was given some consideration in the center of the empire, even when the caliphate was not at its highest, is shown by Ṭabari, III, 1481-85. On the *jihād* as a state institution rather than an individual one, see M. Khadduri, *War and Peace in the Law of Islam* (Baltimore, 1955), pp. 60ff.

gious affiliation. According to Taghribirdi and the Egyptian tradition he was a *ḥanīfite*,¹ like Bakkār, and this is accepted by Hassan.² But another possibility is suggested by ibn al-Athīr,³ who, although late, was fairly well informed on Ṭulūnid matters.⁴ His description of ibn Ṭulūn mentions the latter not only as a pious man full of concern for religious problems, but also as a staunch *shāfiʿite*. The question cannot be settled without a more thorough attempt at comparing ibn Ṭulūn's actions and opinions with the lessons of the two schools, but could it be perhaps that, in his somewhat puritan approach, ibn Ṭulūn had been influenced by certain *shāfiʿite* methods of thought?⁵

If these hypotheses are acceptable, one can see how the coinage of Aḥmad ibn Ṭulūn serves to qualify the notion of the independence of the first dynasty of Egypt. We must now examine the problem from another direction and attempt to compare the expression of sovereignty of Aḥmad ibn Ṭulūn with that of the other dynasties of the century. The Ṭāhirids and the Aghlabids, although both dynasties started considerably earlier than the Ṭulūnids and although the collapse of the Ṭāhirids actually corresponded to the rise of the Ṭulūnids, are most likely to be fruitful as comparative subjects, since the establishment of the literally contemporary Ṣaffārids was the result of a conquest, while Ibrāhīm ibn al-Aghlab and Ṭāhir ibn al-Ḥusayn, just as Aḥmad ibn Ṭulūn, were appointed to their offices.

The 184/800 appointment of Ibrāhīm as governor (*amīr*)⁶ of Ifrīqiyyah was truly "la solution avantageuse d'une situ-

¹ Taghribirdi, III, p. 3.

² Hassan, p. 222.

³ Ibn al-Athīr, VI, p. 56 (under year 270).

⁴ Cf. below.

⁵ See J. Schacht, *The Origins of Muhammadan Jurisprudence* (Oxford, 1950), pp. 283ff., 317-8, and *passim*.

⁶ It would seem that the word *amīr* refers to a function here rather than to a title, ibn Idhāri, *Kitāb al-Bayān*, ed. G. S. Colin and E. Levi-Provençal, vol. I (Leyden, 1948), p. 92. Cf. also above p. 39, note 5.

ation difficile qui n'avait que trop duré."¹ The "difficult situation" was not the ambition of one leader, but the chaos of North African politics in the late eighth century. Ibrāhīm ibn al-Aghlab appeared to be the only leader who could unite all parties, and Hārūn al-Rashīd empowered him to do so. From then until the end of the dynasty we do not have much evidence of any continuous political relationship between the various Aghlabid rulers and the caliphs. In particular there is no indication that each Aghlabid prince was invested anew by the Commander of the Faithful.² At the same time we have no evidence that there was any break between Baghdad and Qayrawān. In one case where it is related that Ziyādah Allāh, while drunk, wrote a challenging letter to al-Ma'mūn, it is added that he immediately tried to overtake the messenger, and, failing to do so, that he sent a second letter in much more submissive terms. Al-Ma'mūn, we are told, did not pay any attention to the first letter.³ Furthermore, when al-Mu'taḍid ordered Ibrāhīm ibn Aḥmad to resign in favor of his son, he did so; but, instead of appearing before the caliph to justify himself, he preferred to go and die in the Holy War against the Christians.⁴ Certain coins also were marked as being for the caliphate,⁵ and it seems⁶ that there was a continuous tribute sent from North Africa to Iraq. Similarly the spiritual prestige of the caliph was in no way

¹ G. Marçais, *La Berbérie et l'Orient au Moyen Age* (Paris, 1946), p. 59; see, in general, pp. 57-63 for a lucid statement of the respective positions of the Aghlabids and of the caliphate.

² Cf., however, the use of the word *aqarra* "to confirm," in the cases of al-Ma'mūn and al-'Amin with respect to Ibrāhīm and Abdallāh, in ibn Idhārī, pp. 94 and 95. The word does not occur for any later prince.

³ al-Nuwayri in Ibn Khaldūn, *Histoire des Berbères*, tr. de Slane and Casanova, I (Paris, 1925), p. 413.

⁴ Ibid., pp. 431-2.

⁵ J. Farrugia di Candia, "Monnaies Aghlabites du Musée du Bardo," *Revue Tunisienne*, vol. VI (1935), p. 272; also vol. VII (1936), p. 179.

⁶ Marçais, pp. 60 and 62.

impaired.¹ And yet, on the coins of the Aghlabids, with the exception of the coins of Ibrāhīm I, there is no mention of the name of the caliph.² For the first quarter of the third century this may not be too surprising, since, in a number of cases, even gold and silver coins struck in areas directly controlled by Baghdad did not give the name of the ruling Commander of the Faithful.³ But from the reign of al-Mu'taṣim, and certainly from the time of al-Wāthiq, the name of the caliph always occupies the lower part of the reverse area, with, more often than not, the name of the heir apparent on the obverse. This practice was not followed by the Aghlabids. Did they simply continue the traditional type? Or were they indicating that, while vassals of the caliphate as an institution, they did not necessarily feel subjected to any specific caliph and that they considered themselves as politically and financially independent? The second explanation is certainly the more likely one and corresponds quite clearly to the reality of the time.⁴ In other words, in the case of the Aghlabids, we deal with a dynasty, whose first representative was legally appointed by the caliph and which perpetuated itself without interfering in the affairs of the caliphate and without being touched by it. It is, as has been justly seen by Marçais, the perfect application of the first kind of *amirate* according to Māwardi,⁵ but it went much

¹ See the examples given by Marçais and in particular the curious 250 inscription in the mosque of Tunis, where the name of the caliph is mentioned, but not that of the Aghlabid; cf., lately, G. Marçais, *L'Architecture Musulmane d'Occident* (Paris, 1954), p. 7.

² For instance, *B.M.*, II, nos. 188–217.

³ Ibid., I, nos. 255, 256, 267, among many other examples.

⁴ Cf. the words of Nuwayri in ibn Khaldūn, pp. 397–8.

⁵ Marçais, *Berbérie*, loc. cit.; Māwardi, tr. Fagnan, pp. 59ff. Here again the question can be raised whether in the third century A.H. we are already dealing with a formalized legal theory of the amirate or whether cases like that of the Aghlabids prompted the formulation of the theory.

further in its expression of independence than any previous dynastic group (always with the exception of Umayyad Spain), for it completely ignored the caliphal right of the *sikkah*, and only preserved the higher one of the *khutbah*.

At the other end of the empire the major power until the middle of the third century A. H. was that of the Ṭāhirids. They are generally considered, and in many ways justifiably so, in relation to the later so-called Persian dynasties, but the curious point about them is that, regardless of their significance as the first materialization of a Persian renaissance, from the caliphate's point of view they fulfilled in the East the same function *mutatis mutandis* as that of the Aghlabids in the West. They did not assume the rule of Khurāsān themselves, but it became apparent to the caliphs that the troubled situation in northeast Persia could only be resolved through the appointment there of Ṭāhir.¹ After his death his descendants were all regularly appointed by the caliphs until in 259 Muḥammad ibn Ṭāhir was forcibly removed by the first Ṣaffārid.² But it is doubtful whether one can properly speak of a Ṭāhirid dynasty in Khurāsān, since many Ṭāhirids held high office in other parts of the empire, combining these at times with their own governorship in Khurāsān. The annals of 'Abbāsīd governors in the first half of the third century show us many examples of sons succeeding fathers at the helm of various provinces³ and the fact that five generations of Ṭāhirids followed each other as rulers of Khurāsān shows simply that from the point of view of the caliphate they fulfilled their purpose without endan-

¹ Cf. ibn al-Athīr, V, pp. 196-7; Ṭabari, III, p. 1054; B. Spuler, *Iran in früh-islamischer Zeit* (Wiesbaden, 1952), p. 59; and pp. 320-1 for a discussion of the Ṭāhirids' relationship to the caliphate and reliance on the older Sasanian tradition.

² Ṭabari, III, pp. 1065, 1102, 1339, 1505-6, 1881-2.

³ E. de Zambaur, *Manuel de Généalogie* (Hanovre, 1927), *passim*.

gering the unity of the caliphate or creating undue trouble.¹ The literary evidence is here fairly well confirmed by the numismatic. On the one hand the existence of copper coins with debased Sasanian busts² shows the concern of some Tāhirids for the Sasanian heritage still alive in east Persia. But at the same time their coinage was not much different from that of many a governor. The name of the caliph is always mentioned and the few exceptions that are known are called "revolutionary" by G. C. Miles.³ Since they were struck by Ṭāhir ibn al-Ḥusayn in 206, they should probably be connected with his tentative separation from the caliphate mentioned in a previous note.⁴ In general, however, to consider Ṭāhirid coins separately as the expression of a new independent dynasty would lead us logically to consider any coin bearing the name of an officially appointed governor as the expression of the same independence. This does not mean denying the importance of the Ṭāhirids in the growth of independent movements in Persia. It merely suggests that, *from the point of view of the official expression of sovereignty*, there is no justification in calling the Ṭāhirids an independ-

¹ The only exception to this would be the curious and sudden dropping of the name of the caliph in the *khutbah* of 207 by Ṭāhir ibn al-Ḥusayn. His death, which followed the event quite closely, did not permit him to pursue whatever course he had in mind. Cf. al-Ya'qūbi, II, p. 556; Ṭabari, III, p. 1064; ibn al-Athīr, V, p. 204. In view of what followed the importance of this event seems to me to have been overestimated by V. Bartold, *Turkestan down to the Mongol Conquests* (London, 1928), p. 208, and by many others.

² *B.M.*, II, no. 240.

³ G. C. Miles, *The Numismatic History of Rayy* (New York, 1938), nos. 108 B and C, and commentary pp. 110-111. See also the note of Lane-Poole in *Khedivial*, p. 80, where it is pointed out that a great number of coins were issued in places which were definitely under Ṭāhirid control without mentioning the name of the Ṭāhirids. On this subject see also E. de Zambaur, "Contributions II," *Numismatische Zeitschrift*, XXXVII (1905), pp. 119ff., and especially pp. 125ff.

⁴ Cf. above, note 1.

ent dynasty. The whole situation was, of course, to be altered in Persia with the advent of the Ṣaffārids and Sāmānids, just as it had been altered in the West with the conquering dynasties of the Umayyads of Spain and of the Idrīsids of Morocco.

Thus in comparing the Ṭulūnids with the other two "dynasties" of *appointed amīrs* of the third century A. H., we can see that there was a definite difference between what happened in Ifrīqiyah, Miṣr, and Khurāsān. In North Africa, the Aghlabids, officially appointed by the caliphs before taking things into their own hands, soon dropped the name of the caliph from their coins but maintained the principle of their appurtenance to the Islamic *koiné* through regular gifts and through sporadic announcements of their activities. The caliphs, probably largely ignorant of what was happening in their far-flung province, now and then showed some interest and some initiative in Aghlabid affairs. The Aghlabids, therefore, come as close to being independent as is possible within the framework of sunni Islam. The Ṭāhirids of Khurāsān would really be at the other extreme. This "iranisierte Familie arabischen Ursprungs"¹ belongs in fact to the category of hereditary top civil and military servants of the state who have taken to heart the interests of one part of the empire. Many examples could be found of similar occurrences in other civilizations and at other times. They were identified with a specific cultural area of the Islamic world, but, with a unique and short-lived exception, they did not sever their allegiance to the caliphate, either in fact or in their coinage.

The case of the Ṭulūnids, and especially of Aḥmad ibn Ṭulūn, belongs somewhere between these two extremes. Aḥmad was officially appointed in Egypt, but only in a junior capacity. Through his abilities and his intrigues, to

¹ Spuler, p. 59.

which must be added the Zanj war that immobilized the whole strength of Iraq, he rose in power. Official investments were only given to him piecemeal and his assumption of the title of *amīr* together with the striking of coins bearing his own name occurred only when, rightly or wrongly, he felt that it was his legal and religious duty to save the caliphate, and that he was the only one who could do so. Such questions as his personal ambitions and the justification of his assumptions do not matter on this score,¹ since in numismatic and epigraphical analyses we are dealing essentially with the *formal* rationale of man's actions; however, it should be noted that Aḥmad's constant concern with religious forms, the Holy War and religious justification of his actions could not have been very hypocritical, at a time when power politics of the roughest kind were shaking the Muslim world.² His coinage retained all the official notations expected in the realm controlled by the caliphs. Its importance, therefore, resides not so much in what appeared on it as in the timing of its appearance. Thus, while on the one hand the constant focusing of his attention on the affairs of the caliphate brings him closer to the situation of the Ṭāhirids (especially the earlier ones), his more or less self-imposed isolation from the actual power in Iraq led him to a degree of independence which belonged rather to the Aghlabid type. The ambiguity of the Ṭulūnid phenomenon in Egypt will appear most

¹ The whole psychological problem of Aḥmad ibn Ṭulūn has been admirably analyzed by Becker, and, with minor exceptions, the coinage confirms his analysis, but it may be wondered whether his diagnosis of a pure power struggle between al-Muwaffaq and ibn Ṭulūn is not oblivious of the tremendous power of religious motivations in the mediaeval world.

² Ibn Ṭulūn was not the only one who used religious arguments. In a panegyric written for the caliph al-Mu'taḍid a number of years later, the Ṭulūnid is called "a second Pharaoh of Egypt, who defied God and obeyed Satan." C. Lang, "Mu'taḍid als Prinz und Regent, ein historisches Helden-gedicht von ibn al-Mu'tazz," *Zeitschrift der Deutschen Morgenländischen Gesellschaft*, XL and XLI (1886-7), verses 35-36.

strikingly in the time of Aḥmad's son and successor, Khu-mārawayh.

A last point must be made about the coinage of Aḥmad ibn Ṭulūn. Aside from Miṣr, only two mints are known, al-Rāfiqah and Dimishq.¹ Dimishq appears only twice, in 269 and in 270, and, although generalizations cannot be made on the basis of unique coins, it may be suggested that the appearance of the Damascus mint must be related to the meeting of 269 and to its consequent full assertion of ibn Ṭulūn's power. As to the al-Rāfiqah mint, of which we have many examples for 267, 268, and 270 (one coin), there is no doubt that the choice of the easternmost outpost of ibn Ṭulūn's possessions must be connected with his claim on the person of the caliph and with his opposition to al-Muwaffaq. The year 267 was perhaps the one in which the flight of al-Mu'tamid was planned and the sending to Diyār Muḍar of Lu'lu', ibn Ṭulūn's most important lieutenant,² may have been connected with these plans. Lu'lu's importance and comparative independence from ibn Ṭulūn is shown by the addition of his name to the coins of 268. In spite of Lu'lu's defection and of the failure of al-Mu'tamid's escape,³ and although at that time ibn Ṭulūn's control over a part of the Jazīrah was not secure, the striking of al-Rāfiqah coins was continued in 269 and 270. Ibn Ṭulūn was still intent on asserting his power as close as possible to the caliphate. And perhaps the more political or strategic character of the al-Rāfiqah coins could find a further argument in the fact that with one known exception⁴ all the coins whose weight is published are definitely lighter and therefore

¹ In a forthcoming work G. C. Miles attributes, on epigraphical grounds, a series of copper coins from Ashmūn to the Ṭulūnids.

² Ibn Sa'id, pp. 67-8.

³ Ṭabari, III, 2037-8.

⁴ *Sumer*, III, p. 279.

more debased than the usual Miṣr dinars.¹ As far as the latter are concerned, not only were they kept at a consistent weight and gold standard, but it was part of the policy of ibn Ṭulūn to maintain a high standard of currency. In a story transmitted by ibn Saʿīd, it is said that for a king the purity of the gold used in his *dīnārs* means the purity of his life and afterlife.² It is added that the best *dīnārs* are of the *Muʿtaṣimi* and *Sindi* types, and that ibn Ṭulūn did his best to reach the latter's level.³

2. The coinage of Khumārawayh ibn Aḥmad and late Ṭulūnid coinage

A discussion of the coinage of Khumārawayh ibn Aḥmad ibn Ṭulūn may best be attempted from two different points of view. First, there is an historical problem, to the solution

¹ However in so far as I have been able to gather in the published catalogues and at the American Numismatic Society, the provincial ʿAbbāsīd coins from that period are similarly lower in weight than average; see below.

² Ibn Saʿīd, p. 33.

³ Ibid., p. 34. The story occurs also in Maqrīzi, Wiet's ed. in vol. 30 of the *MIFAO* (Cairo, 1911), pp. 181-2, and in al-Balawi, *Sīrah Aḥmad ibn Ṭulūn*, ed. Muḥammad Kurd ʿAlī (Damascus, 1358 A.H.), p. 196. The latter book was unfortunately unavailable to me and I owe the reference to A. S. Ehrenkreutz, "The fiscal administration of Egypt in the Middle Ages," *Bulletin of the School of Oriental and African Studies*, vol. XVI (1954), p. 510, note 3. There seem to be slight variations in these accounts and Maqrīzi, in particular, relates that Aḥmad's coins became in turn noted for their excellency and even their superiority over *Muʿtaṣimi* and *Sindi* coins. They were called *Aḥmadiyah*. On all these terms cf. Sauvaire's "Matériaux. . . .," *Journal Asiatique*, 7ème série, vol. XV (1880), pp. 271-2. A Sindi coin was of the type developed by al-Sindi, who took over the mint after the fall of the Barmakids, while a *Muʿtaṣimi* was obviously according to the standard of the coins struck by the caliph by the same name. See Miles, *Rayy*, pp. 84, 115, 117 for these personages, but I do not know of any evidence showing that in their own times their coins were especially noted for their excellency.

of which the numismatic evidence may be of some help. Second, there is a problem posed by the coins themselves in the state in which they have been preserved. It must be borne in mind, however, that, except for the earliest period of Khumārawayh's rule, the history of the Ṭūlūnid regime in Egypt after the death of Aḥmad is far less interesting and far less eventful than the few years which saw the establishment of the dynasty in Fuṣṭāṭ, and the coinage does not pose any major problem.

Khumārawayh ibn Aḥmad succeeded his father without any difficulty, at the age of twenty.¹ The army and the civil government of Egypt accepted him as their leader.² But his position was not confirmed by the caliphate, in whose eyes Ishāq ibn Kundāj was the legal governor of Egypt. Therefore Khumārawayh's first task was to be recognized by the supreme power of Islam. There is no evidence to suggest that he tried in any way to maintain the positive moral and legal position of his father. Neither his character nor his training had prepared him for such an attitude. His sole aim was to stay in power. But this did not mean that he would meekly accept the dictates of al-Muwaffaq. After a series of military campaigns (on which more will be said below), in 273 a political and perhaps financial arrangement was reached with al-Muwaffaq. The latter was again mentioned in the *khutbah*, which suggests that Khumārawayh had maintained for three years the situation which existed at the time of Aḥmad's death, including the cursing of al-Muwaffaq.³ The

¹ On Khumārawayh, see the article in the *Encyclopedia of Islam*, Hassan, pp. 107-133, and the chronicles. Becker, pp. 182ff., shows as usual a remarkable insight into the period. In general, however, we are far less informed on Khumārawayh than on his father and, as has been noted by Hassan, p. 116, the great compilers of world annals such as Ṭabari and ibn al-Athīr are often clearer in their exposition of Ṭūlūnid activities than the Egyptian writers.

² Ibn Sa'īd, p. 74.

³ Kindi, p. 237; Maqrīzi, I, p. 321.

political agreement between Egypt and the caliphate is important in that it closed the chapter opened ten years earlier with Aḥmad's refusal to send more money to al-Muwaffaq than was due to him. The politico-religious attempt of Aḥmad's had failed, since al-Muwaffaq was still in power. But, at the same time, the so-to-speak illegitimate succession of Khumārawayh to his father's position was recognized by the caliphate, largely because the military expedition sent to crush him had failed. No information is given on the specific financial arrangements made at that time, although there probably was some agreement on that matter; but the point is established that Khumārawayh and his successors (*wulduhu*) receive the governorship (*wilāyah*) of Egypt and of the Syrias (*al-sha'māt*, meaning Palestine, Syria proper, the *thughūr*, and, almost certainly, the right bank of the Euphrates) for thirty years.

The importance of this agreement and of the events which preceded it consists in that it emphasizes two points: the absolute necessity for a working arrangement with the caliphate;¹ and the fact that the caliphate neither recognized the independence of the Ṭulūnids nor accepted without reservations the fact of a dynasty. By setting a time limit al-Muwaffaq acknowledged the existence of the Ṭulūnids,² but refused to farm Egypt out to them permanently and thereby admit the theory of dynastic succession outside the

¹ On this point see the remarks made by Becker, p. 184, about the apparent necessity for Turkish leaders throughout Muslim history to be fully accepted within the theoretical framework of the caliphate. Cf. Taghribirdi, III, p. 4, where ibn Ṭulūn is shown as hating other Turks very strongly. Note also that most of his sons received names from pre-Islamic Arab traditions. There is here again an interesting example of adaptation to and adoption of a culture by a second generation of men who came from an alien group.

² Note that Ṭabari and others, when talking about Egyptian army at that time, do not say *jaysh Khumārawayh*, but *jaysh ibn Ṭulūn*.

caliphate in the Muslim community. This agreement, no doubt, represents a step toward independence when compared with the regular appointments of Ṭāhirid governors, but it is not yet on a par with the situation of later centuries, when the dynastic sense increased and the relationship to the caliphate became more tenuous. In 279, after another series of military actions, in which al-Muwaffaq may not have been directly involved, a new agreement was reached with al-Mu'taḍid, the new caliph and former commander of the armies which had attacked Khumārawayh in 271. Actually this new agreement confirmed and clarified the first one. The area to be controlled by the Ṭulūnids was defined as extending from the Euphrates to Barqah; administrative and judiciary autonomy was accorded to them; and the tribute was fixed permanently.¹ This agreement was maintained until 286, when the Ṭulūnid Hārūn ibn Khumārawayh lost his northern possessions, was compelled to increase the tribute, and finally seems to have been forced to accept caliphal supervision in his administration.² In 292 Egypt became again a province directly administered by the caliphs.

The coinage of Khumārawayh and of his successors confirms this state of affairs. From 270 on until the end of the dynasty it reflects quite faithfully the situation of the caliphate. Al-Mu'tamid and al-Mufawwaḍ continue to appear on coins. Al-Muwaffaq does not, and it should be presumed, although for obvious tactical reasons the question does not appear to have been raised during the discussions, that the Egyptians still maintained the fiction of the division of the empire. Al-Muwaffaq died in *Ṣafar* 278 and was succeeded by his son al-Mu'taḍid in his position of second in the line of succession.³ Exactly a year later al-Mu'taḍid edged out

¹ Kindi, p. 240; for the tribute see Hassan, p. 118.

² Taghribirdi, III, p. 118; Hassan, pp. 141-2.

³ Ṭabari, III, p. 2123.

his cousin al-Mufawwaḍ and became the only official *wāli al-‘ahd*.¹ In *Rajab* of the same year 279 al-Mu‘tamid died and al-Mu‘taḍid became caliph.² Two coins struck in Miṣr and preserved in the University Museum and American Numismatic Society collections (no. 52) belong to the early part of 279, since they have al-Mu‘taḍid as heir apparent, but a number of coins of the same year already have him as caliph. They must have been struck shortly after he became caliph and confirm the fact that it was customary to strike coins as soon as a new man attained supreme power. The same thing occurred at the death of al-Mu‘taḍid in *Rabi‘ II* 289.³

Another body of epigraphical evidence parallels that of the coins and can help in defining the relationship between the Egyptian dynasty and the caliphate. It consists of the *ṭirāz* inscriptions, of which a comparatively large number survives from the period under consideration. Two inscriptions are particularly interesting since they are dated in 272, that is before the agreement was reached which recognized Khumārawayh as governor of Egypt.⁴ One was made in Tinnīs, and contains not only the name of the *amīr* Khumārawayh, *mawla amīr al-mu‘minīn*, but also that of the caliph and of al-Mufawwaḍ, curiously enough here simply called Ja‘far. This inscription confirms the evidence of both coins and texts, showing that Khumārawayh preserved the situation as it was at the time of Aḥmad’s death in spite of the illegality of his situation. The other *ṭirāz* inscription, made this time in Alexandria,⁵ bears the name of the caliph only. In other words, during the time when Khumārawayh was actually fighting the forces of the caliph, textiles were

¹ *Ibid.*, III, p. 2131.

² *Ibid.*, III, p. 2133.

³ *Ibid.*, III, pp. 2206–7.

⁴ *Répertoire*, no. 731.

⁵ *Répertoire*, no. 732.

officially made in Egypt for the caliphate without mention of the Egyptian ruler's name.

The existence, after 273, of well over thirty published *ṭirāz* inscriptions from Egypt during the Ṭulūnid period can help in providing an explanation for this anomaly. Of these inscriptions all those made in Tinnīs, except one, and the only one known from Damietta¹ bear the name of the Ṭulūnid ruler, while all those made in Alexandria or Miṣr bear only the name of the caliph.² It will be recalled that Aḥmad ibn Ṭulūn had received the right to deal with *ṭirāz* matters.³ It may be assumed that Khumārawayh maintained the practice established by his father and that it was accepted by the caliphate after 273 or 279, although there is no mention of it in the texts. But what is important to us is that at no time⁴ did the Ṭulūnids control *all* the textile factories of Egypt. Serjeant, in his study of texts on Islamic textiles, has suggested that Tinnīs and Damietta were centers where Christians from Egypt worked and where a Coptic type of textile was made.⁵ If his conclusions are correct, the Ṭulūnids only had power over the purely local, Coptic factories; but throughout their history the cloth manufacture in the two largest cities of Egypt, Fustāṭ⁶ and

¹ *Ibid.*, nos. 757, 767, 774, 785, 788, 805, 813, 814, 818, 825, 847; the exception is no. 769.

² *Ibid.*, nos. 736, 758, 762, 768, 778, 779, 780, 784, 793, 824, 827, 828, 837, 838.

³ Above p. 36.

⁴ The statement of ibn al-Athīr, VI, p. 50, quoted by R. B. Serjeant, "Material for a History of Islamic Textiles," *Ars Islamica* IX (1942), p. 72, that one of the reasons for the cursing of ibn Ṭulūn was that he had dropped the name of al-Muwaffaq from the *ṭirāz* is rather curious, since the name of the heir apparent occurs only occasionally and that of the "heir in second" is not known.

⁵ Serjeant in *Ars Islamica*, XIII–XIV, pp. 88 and 91 ff.

⁶ Miṣr is taken here to mean Fustāṭ. Serjeant assumed it to be so for textiles and Lane-Poole for coins. For a different view cf. G. Wiet, *L'Exposition Persane de 1931* (Cairo, 1933), p. 6.

Alexandria, was not their direct concern but that of the far away caliphs. The implication of this state of affairs in the organization of textile manufacturing, a state concern almost on the same level as the striking of coins,¹ does not concern us here,² but these examples are important in illustrating once more the curious dichotomy of mediaeval Islamic civilization, not only a dichotomy between practice and theory which has often been discussed,³ but a dichotomy between levels of legal authority. With textiles, just as with coins, it was essential to preserve the fiction of an effective caliphal control. And, thus, just as in Islamic art a series of unifying factors tie together the tremendous variety of themes and ideas which found their way into mediaeval Near Eastern culture,⁴ the more or less self-sufficient political centers (outside of the remote areas of North Africa and Spain) felt bound to accept symbols of a politico-religious authority which at times was not capable of raising an army to defend itself.

There is yet another historical problem where the coins can be of help. Between 270 and 279, as has been mentioned, Khumārawayh was involved in a series of military operations whose purpose was to consolidate his position in Syria. These operations are described in the texts, but since they were numerous and as they involved always the same people,

¹ See Serjeant's first chapter, *Ars Islamica*, IX, pp. 60ff.

² A distinction may be emphasized here between the *ṭirāz al-khāssah* and the *tirāz al-ʿāmmah*, Wiet, *Exposition*, p. 7. See also A. Grohmann, article "Ṭirāz," in *Encyclopedia of Islam* (note in particular all the additions found in the supplement), where a number of texts are given about the various Tinnīs factories.

³ Cf., most recently, J. Schacht, *Esquisse d'une Histoire du Droit Musulman* (Paris, 1953), pp. 70ff.

⁴ R. Ettinghausen, "Interaction and Integration in Islamic Art," in *Unity and Variety in Muslim Civilization*, ed. G. von Grönebaum (Chicago, 1955), *passim*. Most of the studies in this book emphasize the same theme from different angles.

many a chronicler appears to have been confused about their order and their exact dates. In the case of one mint the remaining coins can be used to determine the succession of the campaigns. The case is that of the coins struck in al-Rāfiqah. They are known for every year between 270 and 279. After 279 they still appear, but they are of no importance to us here since they are purely 'Abbāsīd,¹ reflecting probably the fact that, as was previously mentioned, the 279 agreement limited Khumārawayh's possessions to the areas west of the Euphrates and presumably did not include the Diyār Muḍar in its totality, if at all. It is the period between 270 and 279 which interests us here and it is the most eventful one in terms of military expeditions. Among the coins the name of Khumārawayh appears in 270, 273, 274, 275, 276, 277, 278, and 279. But, in 270, 271, 272, 274, and 275, coins were also struck in al-Rāfiqah which do not bear the Ṭulūnid's name and should therefore be considered as purely 'Abbāsīd.² The question is whether this body of coins can help us determine with some degree of certitude the exact succession of events.

¹ 281: *Khedivial*, no. 623; 283: Paris, I, no. 1043; 291: Tiesenhausen, no. 2182.

² 270: Porter in *Numismatic Chronicle* (1921), p. 323; 271: Casanova, no. 639; 272: *B.M.*, IX, no. 352n and U.M.; 274: Rogers, no. 38, Paris, I, no. 998, U.M.; 275: Tiesenhausen, no. 2876. The 274 coins present a curious problem. They bear on the reverse the name of Aḥmad ibn al-Muwaffaq, the future al-Mu'taḍid, while the obverse has the name of al-Mufawwad. The oddity of the coin consists in the fact that in the month of *shawwāl* 274 Aḥmad quarrelled with his father and was jailed (Ṭabari, III, 2115). The coin may have been struck in the early part of the year, but, so far as I have been able to determine, Aḥmad had no official position at the time. That he was at the head of a political *coterie* at the time is made quite clear from the various stories told about him by Ṭabari (cf. index) and it appears that the activities of that *coterie* led to his arrest. Was this coin the result of some manoeuvre of that political group? Did ibn abi al-Sāj belong to it?

It will be recalled that in 269 Ishāq ibn Kundāj had been appointed by al-Muwaffaq as governor of all of ibn Ṭulūn's possessions.¹ This man, whose lack of military ability (I believe that he lost just about every battle in which he was involved during the period under consideration) was only matched by his pugnacious interference wherever he thought he might gain some advantage, will become the main actor in the subsequent fighting. At the time of ibn Ṭulūn's death he was in Mosul. The news of ibn Ṭulūn's death traveled fast and, while one of the first acts of the new ruler of Egypt was to strike coins with his own name in both Miṣr and al-Rāfiqah, ibn Kundāj moved towards Syria, underestimating, as ibn al-Athīr specifically says, the power of Aḥmad's son.² There is no doubt that he went first to al-Rāfiqah, since there is a purely 'Abbāsīd coin from al-Rāfiqah in 270 and since Ṭabari states that in 270 a fight occurred there between ibn Kundāj and the Ṭulūnid representative.³

In the meantime, ibn Kundāj had got in touch with the caliphate, which sent an army under abu al-'Abbās Aḥmad ibn al-Muwaffaq, the future al-Mu'taḍid. This army moved along the Euphrates, then crossed over to Qinnasrīn, and, finally, went south to Palestine where, between Jerusalem and Ramleh, it encountered the main Ṭulūnid force at the tragi-comic battle of al-Ṭawāḥīn.⁴ Al-Kindi puts the battle in *Ṣafar* 271, but this sequence of events poses a problem. According to the Egyptian chroniclers (al-Kindi, al-Maqrīzi, Taghribirdi), Aḥmad died on the tenth of *Dhū al-qa'dah* 270. Could it be that during the three months which elapsed between the day of his death and the battle of al-Ṭawāḥīn all this could have occurred: the news had traveled as far as

¹ Ṭabari, III, p. 2048.

² Ibn al-Athīr, VI, p. 56.

³ Ṭabari, III, pp. 2104-5.

⁴ Ṭabari, III, pp. 2106-7; Kindi, p. 235; Hassan, pp. 110-112.

Mosul; coins had been struck at al-Rāfiqah both by the new ruler of Egypt and by the invader; an army had been raised in Baghdad and Mosul and had reached southern Palestine? One should take into consideration here a tradition transmitted by Ṭabari alone¹ to the effect that the news of Aḥmad's death had reached Baghdad as early as *Sha'bān* 270. Ṭabari puts the battle of al-Ṭawāḥīn in *Shawwāl* 271, which would give us some fourteen months between the two events. The dates of the Egyptian historians are definitely unacceptable. And, although one could conceivably adopt Ṭabari's date for the death of ibn Ṭulūn and the Egyptian date for the battle, it is generally apparent that the chronology of events transmitted by Iraqi historians is more trustworthy than that given by the Egyptians. A difficulty would be that no coins from Miṣr are known for the year 270 with the name of Khumārawayh, an odd thing if four months had elapsed between the death of Aḥmad and the end of the year. Yet such coins may still be found and may even be included among the 27 specimens of our type 14, many of which are undescribed, inasmuch as there is a Rāfiqah coin struck in 270 with the prince's name. One should, I think, adopt Ṭabari's dates for both events.

That in 271 we have only an 'Abbāsīd coin from al-Rāfiqah is perfectly natural, since, although the Ṭulūnids won the battle, they only pursued the enemy as far as Damascus which was properly and officially re-occupied. The events of 272 and 273 are more complex and the chronicles are highly confusing. We know practically nothing of what Khumārawayh was doing during most of the year 272. He appears to have stayed in Fustāt. He left in *Dhū al-qa'dah* for Syria, where he had his governor in Damascus murdered for insubordination in *Muḥarram* 273.² At the same time a

¹ Ṭabari, III, p. 2104.

² Kindi, p. 236; Taghribirdi, III, p. 51.

quarrel took place between ibn Kundāj and ibn abi al-Sāj, another roving ‘Abbāsīd governor, half official, half adventurer, who was governor of the Euphrates area south of al-Rāfiqah.¹ Ibn abi al-Sāj called Khumārawayh for help, subjecting himself and the area under his control to the Ṭulūnid. Together they moved against ibn Kundāj, whom they defeated near Raqqah in *Jumāda I* 273, and pursued as far as Samarra.² Ibn abi al-Sāj obtained from Khumārawayh all that had been conquered from ibn Kundāj. The expedition was followed by the agreement of 273, actually reached through the intermediary of ibn Kundāj. Territorially the agreement probably acknowledged the *status quo*, and thus can be explained the purely Ṭulūnid coins of 273.³ A problem arises, however, about the existence of two Ṭulūnid coins of 272 struck in al-Rāfiqah. Only two possible explanations for their existence can be found. One is that some local governor acknowledged Khumārawayh for a while without its being recorded in the literature. It could not have been ibn Kundāj and, according to ibn al-Athīr, ibn abi al-Sāj, who had been governor at Raqqah, only controlled Qinnasrīn at that time. But one may wonder whether ibn al-Athīr is correct in writing that ibn abi al-Sāj was in Qinnasrīn. In 269, according to Ṭabari and ibn al-Athīr, he was in Raḥbah, on the Euphrates below Raqqah, and had gone as far north as Qarqisiyā (at the mouth of the Khābur and the Euphrates),⁴ whence he had dislodged ibn Ṣafwān, a Ṭulūnid governor.⁵ There is, so far as I have been able to

¹ For his earlier career see Ṭabari's index, esp. III, pp. 1941–2 and 2025 ff. For his situation in 269, see ibn al-Athīr, VI, p. 50. In general see article “Sādjids” in *Encyclopedia of Islam*.

² Kindi, p. 236; Ṭabari, III, p. 2112; but the most coherent account is that of ibn al-Athīr, VI, p. 61.

³ ‘Abbāsīd coins of that year, if found, would have to belong to the early part of the year.

⁴ Ṭabari, III, p. 2049; ibn al-Athīr, VI, p. 50.

⁵ Hassan, p. 80.

discover, no information about his whereabouts between 269 and 273. But, when Ṭabari mentions the battle that took place between him and ibn Kundāj in 273,¹ he places it at Raqqah, which would be perfectly logical if the man had still been in the middle Euphrates area. Ṭabari says nothing about his allegiance to Khumārawayh, but the 272 coin would indicate that he had already passed into the Ṭulūnid camp. Thus, while ibn al-Athīr's sequence of events is in all probability the correct one, his dating and his account of the areas in which the events occurred is confused. The 272 coin and the information given by Ṭabari permit a more secure understanding of what happened, where, and when.

A second series of military operations took place between 274 and 276. There were in fact two major operations.² First ibn Kundāj, in 274, started a new offensive towards Syria. Khumārawayh opposed him brilliantly, crossed the Euphrates, and defeated him. Ibn Kundāj gave up all his possessions to the Ṭulūnid and Khumārawayh returned to Egypt. Immediately afterwards ibn abi al-Sāj revolted. Khumārawayh defeated him alone near Damascus (in *Muḥarram* 275), then pursued him to the Jazīrah. There Khumārawayh received help from ibn Kundāj, who was, however, defeated. But Khumārawayh himself was victorious over ibn abi al-Sāj; and the latter, who had been in constant touch with al-Muwaffaq, withdrew to Baghdad, where he received a new appointment.³ These events are confirmed by the numismatic evidence, which definitely favors ibn al-Athīr's account over that of the Egyptian chronicles. In 274 there appears a series of 'Abbāsīd issues, which correspond to ibn abi al-Sāj's revolt. Since there is also a 275 'Abbāsīd coin, it

¹ Ṭabari, III, p. 2112.

² I am following here ibn al-Athīr, VI, pp. 62-64. Kindi, p. 238 and Taghribirdi, III, p. 56 seem to have confused the two operations.

³ The information in Maqrīzi, I, p. 321 and Taghribirdi, III, p. 52 is entirely erroneous as far as the dates of all these events are concerned.

follows that ibn abi al-Sāj remained in Raqqah during the early part of that year, but the Ṭulūnid issues of the same year illustrate Khumārawayh's victory. From 275 until 279 only Ṭulūnid coins are known from al-Rāfiqah. After that date, willingly or not, Khumārawayh lost control of all areas east of the Euphrates.¹

While the coins provide an answer for a number of historical problems, in themselves they pose a major one to which historical texts should provide an answer. One of the striking features of Khumārawayh's coinage is the sudden multiplication of the number of mints. While under Aḥmad only three are known (Miṣr, al-Rāfiqah, Dimishq), under his son five new ones appear (Ḥimṣ, Filastīn, Ḥalab, Ḥarrān, and Anṭākiyah), and none of the older ones is abandoned. Furthermore these mints do not, so far as our present evidence goes, appear from the very beginning of his rule, but only from the year 276, with the exception of Ḥimṣ, which occurs already in 274. It is admittedly true that a numismatic discussion can never wisely be based on negative evidence, unless one deals with hoards or large numbers of coins, and it may very well be that future discoveries will

¹ Two coins have been published which present something of a puzzle. J. Allan, "Unpublished Coins of the Caliphate," *Numismatic Chronicle*, vol. XIX (1919), p. 187, mentioned a B.M. coin dated in 284 and minted in Damascus without the name of Aḥmad ibn Ṭulūn. Dr. J. Walker kindly informed me that this is a misprint and that the coin is dated in 294. The second coin, in the Palestine Archaeological Museum, was published by G. H. Nassar, "The Arabic Mints in Palestine and Transjordan," *Quarterly of the Department of Antiquities in Palestine*, vol. XIII (1948). It was struck in 277 in Filastīn and is described as 'Abbāsīd, not Ṭulūnid. I do not know of any historical event which would have justified an 'Abbāsīd issue at that date in Palestine. The sources (Kindi, pp. 239-240; Taghribirdi, III, p. 52) do say that in that year Khumārawayh left for Syria on some "necessary business," but they do not say what. He returned to Egypt shortly thereafter. Was there some rebellion in Palestine? Or has the coin been incorrectly read?

complete or change the picture. I do not believe, however, that future discoveries will alter the picture too much, since it is between 273 and 276 that Khumārawayh had established himself firmly as ruler of Egypt and Syria, and it is only then that he was free to administer his provinces without interference.

The questions that are raised by the introduction of the new mints are essentially two: what led to the specific choice of mints? What was the function of coins struck in these mints in the economy and life of Ṭulūnid controlled lands? The questions are really too vast to be dealt with entirely at this juncture, inasmuch as contemporary texts are of little help. Furthermore these are not problems which can be easily solved through the case of the Ṭulūnids alone, but ones which should be started with studies of the Umayyad and early 'Abbāsīd periods in order to show the precedents which might have led to the situation under the Ṭulūnids. Only a few remarks can be made here which may contribute towards a better understanding of the whole problem.

First it can be asked whether the Ṭulūnid mints were deliberately located so that every province (*jund*) should have its own. Do the coins show something about the administration of the land? Miṣr, Filasṭīn, Ḥimṣ, Ḥalab, and Anṭākiyah are all in different *junūd*.¹ In the cases of Dimishq and Ḥimṣ, both the province and the capital bear the same name. In Palestine Filasṭīn was used to mean the capital Ramlah,² while Miṣr is almost always identified with Fuṣṭāṭ.³

¹ All the texts dealing with the organization of Syria at that time are conveniently gathered in G. LeStrange, *Palestine under the Moslems*, (London, 1890), pp. 24 ff.

² Note the statement of Naṣir-i Khusraw, *Sefar-nāmeḥ*, ed. and tr. C. Scheffer (Paris, 1881), p. 65 about Ramleh that "this city is known in Syria and the Maghrib under the name of Filasṭīn." Compare the modern usage of *ash-shām* for Damascus.

³ See above p. 64, note 6.

In the two cases of Ḥalab and Anṭākiyah, we are dealing with the capitals of the provinces of Qinnasrīn and al-ʿAwāsim.¹ No city other than the capital is known as a mint in any of these provinces. This points to a remarkable organization of the minting processes in Ṭulūnid times. Instead of using a large number of mint names often with comparatively little concern for administrative units, as was often the case in earlier times, we meet now with what appears to be a conscious pattern of unity. This pattern will be followed in the ʿAbbāsid period after the fall of the Ṭulūnids and under the Ikshīdids, although in Fāṭimid times again the number of mints will increase, often with little relation to the organization of the state.² The only mint which appears immediately after the Ṭulūnids in the area under their control is that of Ṭabariyah, capital of the province of Urdunn, and, even then, a new discovery may easily fill in this gap, so that there is no need to assume that al-Urdunn was not a Ṭulūnid province with its own administration. An interesting fact about these mints is that in at least two cases the Ṭulūnid initiative seems to have acted as a stimulant. Ḥalab and Anṭākiyah were extremely rare mints before the Ṭulūnid period,³ but Ḥalab became quite common in later years.⁴ while Anṭākiyah remained as an Ikshīdid mint, but was soon after taken by the Byzantines.

A last question to be raised with regard to the administrative significance of these mints is why, in the cases of

¹ The town of Qinnasrīn was at that time in decadence and Aleppo was in fact the capital of the *jund*.

² G. C. Miles, *Fāṭimid Coins* (New York, 1951), pp. 50–51.

³ Ḥalab: 146 (Tiesenhausen, no. 747), 153 (*ibid.*, no. 825), 138 (*RIC*, no. 371), 164 (Tiesenhausen, no. 961), all but one coppers. Anṭākiyah: 138 (*RIC*, no. 220, where the final statement in the commentary should be amended).

⁴ I have only checked through the Ikshīdid period.

Anṭākiyah and Ḥalab in particular, was the name of the town chosen rather than the name of the province, since the evidence definitely indicates that the mints were chosen because they represented the provinces. The problem is important, for an answer to it would lead to an eventual understanding of the nature of the process of localization of gold minting in mediaeval Islam. Were the towns chosen indiscriminately? Were the capitals of the provinces chosen because the coins were actually struck there? Is there a difference between coins struck in "royal" foundations and those struck in administrative capitals?¹ While a valid answer could only be given after a comparative analysis of mints on a large scale, one may venture the suggestion that in Ṭulūnid times, the mints were restricted to provinces, but that each province tended to become characterized by its chief city (whether the reasons for determining the chief city be political or economic). Filastīn and Miṣr appear to be exceptions, but even there the official identification of the two terms with the cities of Ramlah and Fustāṭ seems likely, and in the case of Miṣr, this identification would probably be confirmed by the evidence of the *ṭirāz*.

It will be noted that two Ṭulūnid mints have been omitted from this discussion: al-Rāfiqah and Ḥarrān. As far as al-Rāfiqah is concerned, I hope to have established that, since the province was never held by the Ṭulūnids long enough to be truly administered by them, the coins issued there had a political rather than administrative significance.² The appearance in the year 276 only of the mint of Ḥarrān is definitely puzzling. It is in the Diyār Muḍar, but much farther north than the usual scenes of the fighting between Khumārawayh and ibn Kundāj or ibn abi al-Sāj. Further-

¹ For instance al-Mu'izziyah al-Qāhirah as opposed to Miṣr in the Fāṭimid period.

² Above p. 58.

more, Khumārawayh was back in Fustāṭ in *Jumāda I* of that year and, so far as I have been able to ascertain, Ḥarrān is never mentioned by the chroniclers as being part of the areas belonging to Khumārawayh, although an army of Aḥmad ibn Ṭulūn did reach Ḥarrān.¹ The most likely explanation for these coins could be the following. In 275, when ibn abi al-Sāj left Raqqah and moved first to Mosul and then to Baghdad, ibn Kundāj remained in the Diyār Rabī'ah and the Diyār Muḍar.² At that time he was presumably still an ally of Khumārawayh and these coins could be a sign of his allegiance to the Ṭulūnid, struck where he had established himself at the time, that is, at Ḥarrān. This allegiance was probably very short-lived, since in later times we do not hear any more of any relations between the two men, nor are there any coins which would suggest one, although in 280 ibn Kundāj was still active in the same areas, involved this time in 'Abbāsīd politics.³

These coins from Ḥarrān are interesting in yet another respect. With the exception of an Arab Byzantine copper⁴ they are the first known coins from that mint and here again the mint was fairly active in the years which followed.⁵ What seems to have been an accidental event of Ṭulūnid coinage had significant repercussions. But the importance of these coins, as far as the Ṭulūnids are concerned, is, just as in the case of al-Rāfiqah, purely political. Their aim was propagandistic, not economic or administrative; and in that sense they no doubt fulfilled an essential function of coins throughout the middle ages, if not even in the modern period.

¹ Ibn al-Athīr, VI, p. 18.

² Ibn al-Athīr, VI, p. 64. Already in 273 he had withdrawn at one point to Mardīn, *ibid.*, p. 61, and it does seem that he had considerable support in this whole area of the Jazīrah.

³ Ṭabari, III, p. 2137.

⁴ *RIC*, p. 17.

⁵ The next coin is 'Abbāsīd in 284, *RIC*, no. 160.

A last remark should be made about Ṭulūnid coins as a whole. Almost always—the few exceptions are indicated in the catalogue—the coins other than those bearing Miṣr as a mint are lower in weight by a rather considerable margin. In view of the importance of the *sikkah* as a gubernatorial and princely prerogative, it is probable that this custom was imposed from Egypt (it may be worth noting that the Ḥarrān coins certainly struck outside the regular channels are of higher weight than the rest of the provincial coins). It is all the more remarkable because the Miṣr coins are almost throughout¹ of a high and consistent weight, thanks to the wealth of the country and to the high standards imposed by ibn Ṭulūn.² Was this an attempt to assert the high value of the currency struck in Egypt? Does it imply that the coins bearing provincial mints were not necessarily struck there?³ Can it be connected with attempts to protect or to enhance the buying power of the inhabitants of Egypt? These questions are directed to the economic historian and cannot be answered before more complete data are available from other times and places.

¹ Exceptions would be provided by some of the later issues (283, 285, 286, 291). By that time both the political and the economic situation of this regime had considerably deteriorated.

² Cf. above p. 59.

³ There are several pieces of evidence suggesting that provincial coinage, in particular that of al-Rāfiqah, was not struck in the provincial city itself, but either in Baghdad-Samarra or in Fuṣṭāṭ. On the other hand, it must be pointed out that a glance at the illustrations (see, for instance, pl. I, nos. 27, 45) shows that there are notable epigraphical differences between al-Rāfiqah and Miṣr coins. It would seem *a priori* unlikely that the mint masters in the capitals would also devise a special epigraphy for provincial coins. This phenomenon should perhaps be connected with the information given by W. Barthold, *Turkestan down to the Mongol Invasion* (London, 1928), pp. 204 ff., that in Khwarizm debased coinage was introduced to prevent the circulation of local coinage beyond the frontiers of the province.

The marks found on Ṭulūnid coins should be connected either with economic matters or with the identification of certain issues. The general problem of marks is, however, far from being solved and we lack sufficient evidence to draw any general conclusions. An interesting point, however, is that these marks, which are of the most common type (*‘ayn*, *hā*, *ḥā*, *tā-mim*, *bā*) do not occur at the beginning of the dynasty. The earliest example is on the 276 coin from An-ṭākiyah and it should be noted that these signs begin on provincial mints, although by no means all of them, and that they do not become common on Miṣr coins before 280. Here again we seem to meet with a difference between provincial and central mints, whose significance is not very clear and which cannot, I believe, be explained through Ṭulūnid coins alone.

The only individual coin which may still deserve comment is the one numbered 51 in the catalogue. It was published over a hundred years ago by Soret;¹ by the inclusion of the name al-Mu‘tamid it is datable before 278, and it also bears the name of Khumārawayh. On the reverse this small copper bears a name which has been read by Soret as Aḥmad ibn Ya‘qūb. Soret suggested first that this may have been an Aḥmad ibn Ya‘qūb who had for a while governed Sicily for the Aghlabids and who would have gone to the Orient at a certain time. For some reason Soret assumes that he ruled in 268. This hypothesis has to be discarded since both ibn al-Athīr and ibn Idhāri mention that the man, who had indeed been governor of Sicily in 257, was killed in 258.² A second suggestion made by Soret was that Aḥmad ibn Ya‘qūb belonged to a heretical group called al-Ya‘qūbiyah, which had its center not far from Mosul, at a place called

¹ Soret in *RNB* (1854), p. 19.

² Ibn al-Athīr, V, p. 364; ibn Idhāri, ed. Colin and Levi-Provençal, I, p. 115.

Marj, and which in 273 fought against ibn abi al-Sāj.¹ I have been unable to find anything out about the leaders of this sect at that time, but I wonder whether Defrémery, and following him, Soret, did not confuse a small heretical group² with the Christian sect of the Jacobites called *al-Ya'qūbiyah* by Arabic authors, which was certainly represented in the area of Mosul.³ There is little doubt that they did not strike coins as a group and, while it is not impossible to imagine that Ṭūlūnid coins were struck in the area of Mosul, the Soret coins cannot be taken as evidence for it. I have not been able to discover another man by the name of Aḥmad ibn Ya'qūb who could conceivably have been involved in Ṭūlūnid politics. Just as in the case of the other copper coins struck under the Ṭūlūnid regime this one should perhaps be considered as originating from the *thughūr* and Aḥmad ibn Ya'qūb may have been one of the many commanders who at one time or another took the field against the Byzantines.

¹ Ibn al-Athir, VI, p. 61; M. Defrémery, "Sur la famille des Sadjides," *Journal Asiatique*, 4ème série, vol. IX (1847), p. 434.

² 'Abd al-Qāhir al-Baghdādi, *Moslem Schisms and Sects*, tr. K. C. Seelye (New York, 1920), pp. 45-6.

³ Yāqūt, II, p. 689.

PLATES

1



2



3



7



12



14



20



24



27



38



45

COINAGE OF THE ṬULŪNIDS



49



52



57



62



69



70



72



75



COINAGE OF THE ṬULŪNIDS

III



80



81



89



90



94



96



Mishk 258 H.



COINAGE OF THE TŪLŪNIDS

